Fisheries New Zealand
Tini a Tangaroa

Public Submissions Received for the 2022 October Sustainability Round

August 2022

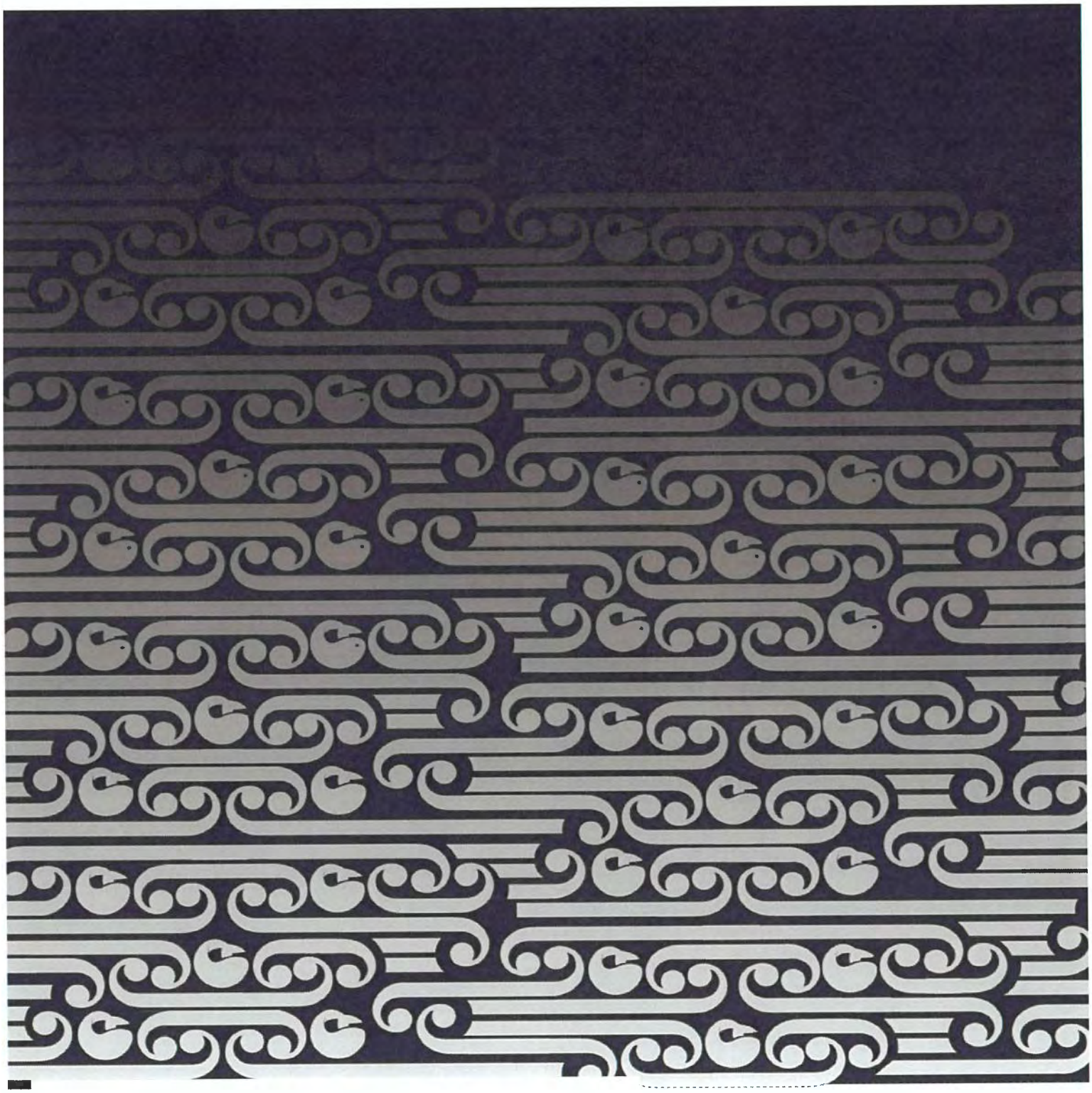
New Zealand Government

Table of submissions and responses on 2022 October sustainability round proposals[1]

Name/Organisation	Relevant stock proposals
Te Ohu Kaimoana	HOK 1, SCI 1, SKI 3, SKI 7, RSK 8, SSK 8, WAR 2, WAR 8, SNA 7, GUR 7, SPO 7, BCO 7, GUR 3, SPO 3, KBB 3G, KBB 4G, DV review (SNA 2, TRE 1, KIN 3, KIN 7, KIN 8)
Nga Hapu o Ngati Porou	HOK 1, WAR 2, WAR 8, DV review (SNA 2, TRE 1, KIN 3, KIN 7, KIN 8)
Iwi Collective Partnership	HOK 1, SCI 1, SKI 3, SKI 7, RSK 8, SSK 8, WAR 2, WAR 8
NZ Sport Fishing Council, LegaSea NZ Angling & Casting Association, NZ Underwater Association	SPO 3, BCO 7, GUR 3, SNA 7, SPO 7, GUR 7, DV review (SNA 2, KIN 3, KIN 7, KIN 8)
The Environment and Conservation Organisations of NZ (ECO)	HOK 1, SCI 1, SKI 3, SKI 7, RSK 8, SSK 8, WAR 2, WAR 8, SNA 7, GUR 7, SPO 7, BCO 7, GUR 3, SPO 3, KBB 3G, KBB 4G
Deepwater Group Ltd	HOK 1, SCI 1, SKI 3, SKI 7, DV review (KIN 3, KIN 7, KIN 8)
Fisheries Inshore New Zealand (FINZ)	RSK 8, SSK 8, WAR 2, DV review (SNA 2, KIN 3, KIN 7, KIN 8, TRE 1)
Southern Inshore Fisheries Management Ltd (SIF)	BCO 7, GUR 3, SKI 3, SKI 7, SPO 3, SNA 7, GUR 7, SPO 7, WAR 8, Deemed Values for KIN 3, KIN 7
Tama Asset Holding Company Ltd	HOK 1, SCI 1, SKI 7, SSK 8, SNA 7, GUR 7, SPO 7, BCO 7
Rangitāne Holdings Ltd	HOK 1, SCI 1, SKI 7, SSK 8, SNA 7, GUR 7, SPO 7, BCO 7
Ngati Mutunga O Wharekauri Asset Holding Co Ltd.	HOK 1, SCI 1, SKI 3, SSK 8, GUR 3, KBB 4G
Ngaruahine Fisheries Ltd	HOK 1, SCI 1, SKI 7, RSK 8, SSK 8, WAR 8
Te Atiawa (Taranaki) Holdings Ltd	HOK 1, SCI 1, SKI 7, RSK 8, SSK 8, WAR 8
Whanganui Iwi Fisheries Ltd	HOK 1, SCI 1, SKI 7, RSK 8, SSK 8, WAR 8
Te Pataka o Tangaroa Ltd	HOK 1, SCI 1, SKI 7, RSK 8, SSK 8, WAR 8
Maruehi Fisheries Ltd	HOK 1, SCI 1, SKI 7, RSK 8, SSK 8, WAR 8
Taranaki Iwi Fisheries Ltd	HOK 1, SCI 1, SKI 7, RSK 8, SSK 8, WAR 8
Sealord Group Ltd	HOK 1, SKI 3, SKI 7
Ngātiwai Holdings Ltd	HOK 1, SCI 1, SSK 8
Raukawa Asset Holding Company Ltd	HOK 1, SCI 1, SSK 8
Fish Mainland	BCO 7, SNA 7, GUR 3, GUR 7, SPO 7, SKI 3, SKI 7
A. Crossland	BCO 7, SNA 7, GUR 3, GUR 7, SPO 7, SKI 3, SKI 7
A. Reay	BCO 7, SNA 7, GUR 3, GUR 7, SPO 7, SKI 3, SKI 7
B. Capill	BCO 7, SNA 7, GUR 3, GUR 7, SPO 7, SKI 3, SKI 7
B. Stewart	BCO 7, SNA 7, GUR 3, GUR 7, SPO 7, SKI 3, SKI 7
B. Reay	BCO 7, SNA 7, GUR 3, GUR 7, SPO 7, SKI 3, SKI 7
D. Broome	BCO 7, SNA 7, GUR 3, GUR 7, SPO 7, SKI 3, SKI 7
G. McInnes	BCO 7, SNA 7, GUR 3, GUR 7, SPO 7, SKI 3, SKI 7
M. Lamb	BCO 7, SNA 7, GUR 3, GUR 7, SPO 7, SKI 3, SKI 7
R.A. Meikle	BCO 7, SNA 7, GUR 3, GUR 7, SPO 7, SKI 3, SKI 7
C. Robertson	BCO 7, SNA 7, GUR 7, SPO 7
E. Jorgensen	BCO 7, SNA 7, GUR 7, SPO 7
L. Brewer	SNA 7, GUR 7, SPO 7
T. Robinson	BCO 7, SNA 7, GUR 7

[1] Some individuals/organisations generally endorsed submissions from another organisations. In those cases only the stocks that were specifically submitted on are listed in the relevant stock proposals column.

Royale Portage Bay Boating Club (Kenepuru based)	SNA 7
B. Pritchard	SNA 7
B. Sheehan	SNA 7
R. Rolston	SNA 7
H. Ross Withell	SNA 7
Ngati Koata Iwi	BCO 7
Maris Fishing Ltd	BCO 7
L. Stevenson	BCO 7
S. Wilson	BCO 7
R. Forrest	BCO 7
L. Elkington	BCO 7
G. Jarvie	BCO 7
Kahurangi Shoals Sustainability Group	BCO 7
G. Smith	Blue Cod general
Te Rūnanga o Ngāi Tahu	KBB 3G
Chisholm Associates (on behalf of 2/3 KBB 3G Quota holders)	KBB 3G
Chisholm Associates (on behalf of all KBB 4G Quota holdersdesomb)	KBB 4G
Chatham Islands Quota Holding Co.	KBB 4G, GUR 3
M. Desmond (University of Otago)	KBB 3G, KBB 4G
NZ Kelp	KBB 3G, KBB 4G
N. Basile	Deemed values
P. Nepia - Korokta Marae, Titoki	Out of Scope
P. Fullerton	Out of Scope
N. Wilson	Out of Scope



Te Ohu Kaimoana's Response to the Review of Sustainability Measures for the 1 October 2022/2023 fishing year

Te Ohu Kaimoana

Contents

This is our response to this year's sustainability review

1. E te Minita, tēnei te mihi ki a koe i tēnei āhuatanga o te wā. This document provides Te Ohu Kaimoana's advice for your review of the sustainability measures for October 2022/23. We invite Fisheries New Zealand to discuss the contents of this response with us, kanohi ki te kanohi.

2. Our role in this review process arises from our responsibility to protect the rights and interests of Iwi/Māori and to assist the Crown to discharge its obligations under both Te Tiriti and the Deed of Settlement [1] We note in particular, te Tiriti guarantee that Māori would maintain tino rangatiratanga over our fisheries resources, the need for both parties to work toward furthering the fisheries settlement, and the requirement to interpret and use powers under the Fisheries Act in a manner consistent with the fisheries settlement[2] .Our response to the sustainability round and the fisheries management measures proposed by FNZ are shaped by three key factors:

Protection of the settlement

3. We note that two of the stocks in this sustainability round include section 28N rights. Section 28N rights create a tension between sustainable TACC increases and good faith protection and furtherance of the fisheries settlement. These issues have been the subject of litigation, some of which is still before the Courts.

4. Any regulatory decision that may potentially undermine the settlement without very clear reasoning as to how it is and will remain consistent with te Tiriti and the fisheries settlement is a cause for concern. An enduring fisheries settlement is not supported by low level regulatory decision making that diminishes the value of settlement assets[3].

Te Ao Maori centred fisheries management

5. Te Hā o Tangaroa kia ora ai tāua translates to the 'breath of Tangaroa sustains us'. Māori rights in fisheries are not just a right to harvest but also to use the resource in a way that provides for social, cultural and economic wellbeing now, and for future generations. Te Hā o Tangaroa kia ora ai tāua, the basis for our advice, does not mean that Māori have a right to use fisheries resources to the detriment of other children of Tangaroa: rights are an extension of responsibility. It is an expression of the unique and lasting connection Māori have with the environment and contains the principles we use to analyse and develop modern fisheries policy, including the positions we have provided in this response.

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[1] Māori Fisheries Deed of Settlement 1992. The Deed is, in part, given effect to by the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 and the Māori Fisheries Act 2004. The Ohu Kaimoana's statutory purpose is set out in s 32 of the Māori Fisheries Act 2004.

[2] See Article 2 of te Tiriti o Waitangi, s 32(b) of the Maori Fisheries Settlement Act 2004, and Fisheries Act 1996, s 5.

[3] Note s 32(d) of the Maori Fisheries Settlement Act 2004.

6. Good fisheries management decisions require good information. We are concerned about both the quality and quantity of information that is available and the reliance on assumption in the regulatory decision-making process.

Mangai and Tautoko for Maori interests

7. We work on behalf of 58 Mandated Iwi Organisations[4] (MIO) who represent iwi throughout Aotearoa. Asset Holding Companies (AHCs) hold Māori Fisheries Settlement Assets on behalf of their MIOs. Those assets include Individual Transferable Quota (ITQ) and shares in Aotearoa Fisheries Limited (trading as Moana New Zealand), which owns 50% of Sealord Group Limited.

8. We do not intend for our response to conflict with or override any response provided independently by Iwi, through their MIOs or AHCs.

9. In developing our response, we sought input from MIOs and Iwi AHCs.
    - Te Ohu Kaimoana acknowledge the views of Te Rūnanga o Rangitāne o Wairau, who support the reduction of the TAC and TACC for all stocks under review, or where applicable, support maintaining the status quo, under Option 1 for stocks.
    - Te Rūnanga o Ngāi Tahu have raised concerns with the proposals for the KBB3G due to the inconsistency with the original position when the stock was introduced.
    - The iwi of Rēkohu/Wharekauri (Chathams Island) support the status quo for the KBB4G fishery.

10. Inshore Stocks

Waewae & Uku – Rough and smooth skate (RSK8 and SSK8)

Our view

- We support Option 2 for RSK8
- We support Option 2 for SSK8
- We support the proposed changes to deemed values.

[4] MIO as defined in The Maori Fisheries Act 2004: in relation to an iwi, means an organisation recognised by Te Ohu Kai Moana Trustee Limited under section 13 (1) as the representative organisation of that iwi under this Act, and a reference to a mandated iwi organisation includes a reference to a recognised iwi organisation to the extent provided for by section 27.

Proposed Options

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
RSK 8	1 *(status quo)*	24	21	1	1	1
	2	43 ↑ (19 t)	37 ↑ (16 t)	1	1	4 ↑ (3 t)
SSK 8	1 *(status quo)*	23	20	1	1	1
	2	49 ↑ (26 t)	43 ↑ (23 t)	1	1	4 ↑ (3 t)
	3	60 ↑ (37 t)	53 ↑ (33 t)	1	1	5 ↑ (4 t)

Our approach

We are cognisant of the importance of these stocks

11. Rough and smooth skates are caught for customary use and a commercial component for Māori commercial fishing entities. In the Ngaa Hapuu o te Uru o Tainui Customary Fisheries Forum Regional Customary Fisheries Management Plan 2012-2017, these stocks are listed as taonga species to mana whenua.

A review of the TAC for RSK8 and SSK8 is overdue

12. Neither stock has been formally reviewed since its introduction to the Quota Management System in 2003. It is important that RSK8 and SSK8 catch limits reflect the reality of fishing trends; RSK8 and SSK8 catch has exceeded the TACC every year since 2003 and 2007 respectively.

13. **We are cognisant of the limited information available for these stocks**
Rough and smooth skates are low knowledge stocks; it is unknown if current catch efforts are sustainable or what the stock status is in relation to the management target. Given the limited available information, it is important that FNZ continue to monitor the progress of the catch in this fishery to detect any downward or upward trend. FNZ have acknowledged these factors and the need for ongoing monitoring in their consultation document.

14. As these stocks are not targeted, and the proposed increases are up to the level of the average catch from recent years, pressure on these stocks would not be expected to increase. Rather, the increase in available ACE will mitigate the deemed value payments currently used to cover this catch.

We support increasing the TAC and TACC with ongoing monitoring

15. Noting these points, and the information available, Te Ohu Kaimoana does not consider that the review of this stock has policy factors that could undermine the Settlement. We support the proposed Option 2 for both RSK8 and SSK8, as well as support the proposed adjustments to the deemed value rates. We encourage FNZ to continue growing the knowledge body of rough and smooth skate and continue to engage, share information and learnings with iwi on such taonga species.

Warehou – Blue warehou (WAR2 & 8)

Our view

- We support Option 1 for WAR2
- We support Option 2 for WAR8
- We raise 28N rights as an issue that both undermines the integrity of the Fisheries Settlement and prevents implementation of TACC increases

Proposed Options

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
WAR 2	Current settings	-	577.835	-	-	-
	Option 1 *(modified Status quo)*	646.835	577.835	5	6	58
	Option 2	297	260 ↓ (317.835 t)	5	6	26
	Option 3	176	150 ↓ (427.835 t)	5	6	15
WAR 8	Current settings	-	232.8	-	-	-
	Option 1 *(modified Status quo)*	250.8	232.8	2	4	12
	Option 2	174	160 ↓ (72.8 t)	2	4	8
	Option 3	117	105 ↓ (127.8 t)	2	4	6

Our approach

28N rights reduce settlement holdings when TACCs are increased

16. We note that WAR2 is a stock with 28N rights attached. It is not directly or immediately impacted by a TACC decrease, however, potential future implications are evident if the stock recovers and catch limits are raised in future. Section 28N rights create a contradiction within the Act by creating a tension between sustainable TACC increases and good faith protection and furtherance of the fisheries settlement.
17. The Crown needs to resolve outstanding issues pertaining to 28N rights with iwi to maintain the integrity of the Deed of Settlement.

There is a need to balance assumptions given lack of information

18. It is not known if the stocks are at or above the management target level. Given this, the proposed options are based on assumptions around the cause of catch levels being below the TAC. Option 1 relies on the assumption that reduced catches are from decreased effort, Option 3 relies on the assumption that catches are a result of decreased biomass. Option 2 balances these assumptions and seeks to acknowledge both decreasing effort and potential that the stock is below the management target level. Given the paucity of information at this given time, we consider that Option 2 is the most appropriate for WAR8.

West Coast South Island mixed trawl fishery – (SNA7, GUR7 & SPO7)

Our view

- We support Option 2 for SNA7, GUR7 and SPO7

Proposed Options

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
SNA 7	Option 1 *(Status quo)*	645	350	20	250	25
	Option 2	743 ↑ (102 t)	450 ↑ (100 t)	20	250	23 ↓ (2 t)
GUR 7	Option 1 *(Status quo)*	1,422	1,298	17	42	65
	Option 2	1,582 ↑ (160 t)	1,450 ↑ (152 t)	17	42	73 ↑ (8 t)
SPO 7	Option 1 *(Status quo)*	373	298	15	33	27
	Option 2	371 ↓ (2 t)	315 ↑ (17 t)	15	25 ↓ (8 t)	16 ↓ (11 t)

Our approach

Sustainable utilisation opportunity for SNA7 and GUR7

19. These snapper and gurnard fisheries are in good health with best available information indicating that they will continue to increase in abundance. Accordingly, we support Option 2 to provide a utilisation opportunity and subsequently support people's livelihoods and wellbeing.

Caution is warranted where information is less certain

20. The information for rig is not as definitive, with the assessment concluding that the stock is about as likely as not to be above target. However, recent years of catch per unit effort have increased substantially in both trawl and set net fishing. This year the TACC was almost fully caught by June showing another year of increased catch rate. Given this, the moderate size of the increase, the recent closures to set netting (reducing pressure) and FNZ's commitment to regular monitoring and reviews, we consider that the risks to the sustainability of the fishery are low. We support Option 2 with the ongoing monitoring of the fishery to ensure sustainability.

Kumukumu/pūwhaiau – red gurnard - (GUR3)

Our view

- We support Option 2

Proposed Options

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	1614	1500	3	6	105
Option 2	1695 ↑ (81 t)	1575 ↑ (75 t)	3	6	111 ↑ (6 t)

Our approach

There is a sustainable utilisation opportunity for GUR3

21. Best available information indicates a healthy and increasing gurnard fishery. Because GUR3 is well above the management target, we support the increase to the TAC and TACC under Option 2.

Pioke/makō/mango – rig - (SPO3)

Our view

- We support Option 2
- We support the proposed changes to SPO3 deemed value rates

Proposed Options

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	766	660	20	20	66
Option 2	802 ↑ (36 t)	693 ↑ (33 t)	20 –	20 –	69 ↑ (3 t)

Our approach

We support providing for utilisation while ensuring sustainability

22. The status of the SPO3 stock in relation to the management target is unknown. However, anecdotal information indicates that the prevalence of rig in this area is increasing. This may be a result of decreasing set net effort. We consider that an increase under Option 2 poses a low risk to sustainability due to the modest size of the increase and the ability to continually monitor and review the fishery.

23. We also acknowledge that SPO3 and GUR3 are often caught together and that an increase in GUR3 ACE (under review) will potentially increase SPO3 catch. Increasing the TACC for SPO3 will allow these stocks to be caught together without deemed value payments.

Rāwaru – bluecod - (BCO7)

Our view

- We oppose the proposed options to decrease the TACC until the outstanding issues around 28N rights are resolved.

Proposed options

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Current settings	-	70.005	-	-	-
Option 1	169	63 ↓ (7.005 t)	27	64	15
Option 2	157	58 ↓ (12.005 t)	27	58	14

Our approach

There are intensive localised pressures on this fishery

24. We note that the fishery appears to be stable in the areas of this fishery where the majority of commercial activity occurs. We further, recognise the significant efforts and measures in place to ensure that the localised recreational pressures on the stock in the Marlborough Sounds are reduced to ensure sustainability. However, best available information indicates that the stock is likely to be below the management target, additionally it appears that while measures have been put in place localised depletion issues remain. Additional policy levers may be needed to address the intensity of the fishing in the Marlborough Sounds, this needs to be implemented in such a way that it does not erode settlement assets.

25. We recommend forming a multi-stakeholder group to discuss and address the localised and seasonal issues affecting this stock in the Marlborough Sounds area. This group could consider options and create a plan in line with the principles similar to the Blue Cod National Plan. Te Ohu Kaimoana would provide support for iwi to be involved as Treaty partners.

28N rights reduce settlement holdings when TACCs are increased

26. We note that BCO7 is a stock with 28N rights attached. It is not directly or immediately impacted by a TACC decrease, however, potential future implications are evident if the stock recovers and catch limits are raised in future. Section 28N rights create a contradiction within the Act by creating a tension between sustainable TACC increases and good faith protection and furtherance of the fisheries settlement.
27. The Crown needs to resolve outstanding issues pertaining to 28N rights with iwi to maintain the integrity of the Deed of Settlement.

Rimurimu - Attached bladder kelp – (KBB3G & 4G)

Our view

- We oppose all proposed options for KBB3G and support the position of Te Rūnanga o Ngāi Tahu for the gradual and careful proofing up of the stock.
- We support Option 1 for KBB4G.

Proposed options

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
KBB 3G	1 (Status quo)	1238	1236.8	0.1	0.1	1
	2 (50% decrease)	619.6 ↓ (618.4 t)	618.4 ↓ (618.4 t)	0.1	0.1	1
	3 (75% decrease)	310.4 ↓ (927.6 t)	309.2 ↓ (927.6 t)	0.1	0.1	1
KBB 4G	1 (Status quo)	274	272.8	0.1	0.1	1
	2 (75% decrease)	69.4 ↓ (204.6 t)	68.2 ↓ (204.6 t)	0.1	0.1	1

Our approach

We support Ngāi Tahu's position on KBB3G

28. We recommend FNZ engage directly with Te Rūnanga o Ngāi Tahu to ensure that the development of the fishery is consistent with their positions for KBB3G. We note their original position when this stock was introduced to the QMS was not given effect to and therefore the TAC was set at a level far higher than their level of preference.

Development of KBB4G Fishery

29. We accept the environmental concerns and potential habitat degradation for the KBB4G stock. However, the rationale provided in the position document does not justify a reduction of the magnitude proposed and is unlikely to have a tangible impact on sustainability concerns. It is important the rights obtained through settlement are not undermined especially when it is unclear whether this reduction will have the desired effect.

30. There are existing issues around appropriate infrastructure in the Chatham Islands that have limited the ability for iwi and other quota holders of KBB4G to utilise their harvest rights. This should not preclude future development of the fishery. We support the position of the iwi and quota holders to maintain the current TAC and TACC levels to support their aspirations for the fishery.

Deepwater Stocks

Hoki – (HOK1)

Our view

- We support Option 1

Proposed Options

Option	TAC	TACC	Non-regulatory catch split arrangement		Allowances		
			Western stock limit	Eastern stock limit	Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	111,140	110,000	45,000	65,000	20	20	1,100
Option 2	106,090 ↓ (5,050)	105,000 ↓ (5,000)	40,000 ↓ (5,000)	65,000	20	20	1,050 ↓ (50)

Our approach

Iwi have significant interests in the hoki fishery

31. Iwi/Māori hold significant rights and interests in the hoki fishery, collectively owning or having ownership interest in 44% of the hoki quota. Iwi hoki quota holders have previously come together and worked with Te Ohu Kaimoana to agree on the most appropriate settings within this fishery. That view has informed the wider industry agreement that is currently in place. This gives us confidence that responsibilities to this fishery are being upheld. We support the ongoing management of HOK1 through the industry initiatives.

Quota holders and industry are effectively managing the sustainability of HOK1

32. The commercial sector's current management arrangements for HOK1 reflects the value of the sustainability status of this fishery. Through industry agreements, decisions are made annually on the level of shelving and which area this catch reduction should come from. This adaptive and conscientious approach to fisheries management is responsive to change and is a model of responsible leadership being demonstrated by rights holders.

Maka-tikati/tīkati – gemfish (SKI3 & 7)

Our view

- We support Option 3 for both SKI3 & 7

Proposed Options for the TAC

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
SKI 3	Option 1 *(Status quo)*	848	839	1	0	8
	Option 2	1,018 ↑ (170 t)	1,007 ↑ (168 t)	1	0	10↑ (2 t)
	Option 3	1,103 ↑ (255 t)	1,091 ↑ (252 t)	1	0	11 ↑ (3 t)
SKI 7	Option 1 *(Status quo)*	848	839	1	0	8
	Option 2	1,018 ↑ (170 t)	1,007 ↑ (168 t)	1	0	10↑ (2 t)
	Option 3	1,103 ↑ (255 t)	1,091 ↑ (252 t)	1	0	11 ↑ (3 t)

Our approach

There is a sustainable utilisation opportunity for SKI3 and SKI7

33. The stock is experiencing above average recruitment and predicted to increase in biomass. The limited availability of SKI ACE affects the profitably of the target fisheries that SKI is caught with due to increased SKI ACE price and deemed value payments. Fuel price increases have also significantly impacted operating costs making fishing trips more expensive – the cumulative effect of these costs detracts from the revenue gained from fishing trips.

34. Given there are no sustainability concerns apparent for these stocks and the ability for Fisheries New Zealand to continue to monitor the progress, we support Option 3 for both SKI3 and SKI7 to allow maximum profitability of fishing trips.

Kōurarangi – scampi – (SCI1)

Our view

- We support Option 3

Proposed Options

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	139	132	0	0	7
Option 2	153 ↑ (14 t)	145 ↑ (13 t)	0	0	8 ↑ (1 t)
Option 3	166 ↑ (27 t)	158 ↑ (26 t)	0	0	8 ↑ (1 t)

Our approach

There is a sustainable utilisation opportunity for SCI1

35. This scampi fishery is in good health and estimated to be above the management target. The scampi fishery is a high value, low volume fishery. An increase in the TACC for this stock would be beneficial as operators could utilise a high value fishery to offset some of the economic impacts from fuel increases. We support an increase in the TAC under Option 3.

Deemed Values

Our approach

36. Our fisheries management system contains a variety of management settings that can be adjusted to achieve the desired results for a fishery. It is important to note that the components of the system are interrelated, and therefore altering one component in isolation may be fraught. In our approach, we analyse all management settings before determining the appropriate lever to alter.

37. Our approach is based on the recommendations of the Deemed Value Guidelines.

38. Fisheries New Zealand is specifically reviewing the deemed values for the following stocks:
    - Haku, kingfish (KIN3, 7 & 8)
    - Tāmure, snapper (SNA2)
    - Araara, trevally (TRE1)

Stock specific commentary

Haku (KIN3)

Our view

- We support the proposed changes to the deemed value rates
- We support removal of the differential rates
- We consider that the TACC is unnecessarily restrictive

39. We agree with Fisheries New Zealand that differential rates are less appropriate for stocks where there is no sustainability concern and where target fishing does not occur and therefore should not apply to KIN3. We also consider that these factors also signal that a TACC increase is appropriate as the current 11 tonne limit is still generating negative economic impacts in an abundant stock.

Haku (KIN7 & 8)

Our view

- We support the proposed changes to the deemed value rates
- We support removal of the differential rates
- We consider that the TACC for KIN8 is unnecessarily restrictive

40. There has been a fundamental issue with the management settings in KIN7 and KIN8. The low TACC relative to abundance has generated a problematic economic environment which degrades the incentives deemed values are designed to support. This issue has been somewhat alleviated by the TACC increase for the 2020/21 year and the subsequent deemed value changes in 2021/22, however, there are still issues.

41. Limited available ACE compared to abundance has driven ACE price well above port price, this means a deemed value cannot be set without contradicting one of the deemed values guidelines. The current and proposed deemed values are well below the ACE price – this disincentivises balancing catch with ACE. Further, the current and proposed deemed values are above port price, disincentivising landing catch. This issue is more apparent in KIN8.

42. Our recommended approach for addressing this issue is to review the KIN8 TACC. The most recent assessment states that the KIN7 and KIN8 stocks are very likely to be above target. Given the health of the fishery, it is unnecessarily punitive to restrict ACE and collect deemed value payments from fishers. In conjunction to a TACC increase, it will be important to monitor the fishery to assess whether fishers are choosing to pay deemed value rates rather than balance with ACE.

Tāmure (SNA2)

Our view

- We support the proposed changes to the deemed value rates
- We support a review of the SNA2 TAC and TACC

Araara (TRE1)

Our view

- We support maintaining the current deemed value rates
- We support a review of the TRE1 TAC and TACC

43. The current deemed values for TRE1 are sitting between ACE price and port price. We acknowledge that the port price for trevally has increased, however, as there is no sustainability concern for TRE1, we support maintaining the current deemed values closer to ACE price.

44. There has been no review of the TRE1 TACC since its introduction to the QMS in 1986. Given this and the recent indications that the stock is likely to be above the management target, we support a review of the TAC and TACC.

Fisheries New Zealand
Tini a Tangaroa

Submission Form

Review of sustainability measures for 1 October 2022

Once you have completed this form

Email to: FMsubmissions@mpi.govt.nz

While we prefer email, you can also post your submission to:

2022 Sustainability Review, Fisheries Management, Fisheries New Zealand, PO Box 2526, Wellington 6140, New Zealand.

Submissions must be received no later than 5pm on Tuesday 8 February 2022.

Anyone may make a submission, either as an individual or on behalf of an organisation. Please ensure all sections of this form are completed. You may either use this form or prepare your own but if preparing your own please use the same headings as used in this form.

Submitter details:

Name of submitter or contact person: Agnes Walker	
Organisation (if applicable):	Nga Hapu o Ngati Porou Management Arrangements. • Pōtikirua ki Whangaokena Takutai kaitiaki trust • Whangaokena ki Onepoto Takutai kaitiaki trust • Te Papatipu o Uepohatu me te Papatipu o te Ngaere trust • Te Aitanga a Mate Te Aowera & Te Whanau a Hinekehu Takutai kaitiaki trust • Nga hapu o Waipiro Takutai kaitiaki trust • Ngati Wakarara and Ngati Hau Takutai kaitiaki trust • These six trusts represent 46 hapu in the area shown below as schedule 3 in the Ngā Rohe Moana o Ngā Hapū o Ngāti Porou Act 2019. The customary fishing area of nhonp means: (i) the area of nga rohe moana o nhonp. (ii) the extension of that area to the outer limit of the exclusive economic zone. (iii) New Zealand fisheries waters in the Ngati Porou area of interest.
Email:	
Fishstock(s) this submission refers to:	Hoki Blue Warehou Deemed Values
Your preferred option as	As hapu who at this stage have limited capacity and capability support the submission of Te Ohu Kaimoana.

detailed in the discussion paper (write "other" if you do not agree with any of the options presented):	

Official Information Act 1982

Note, that your submission is public information. Submissions may be the subject of requests for information under the Official Information Act 1982 (OIA). The OIA specifies that information is to be made available to requesters unless there are sufficient grounds for withholding it, as set out in the OIA. Submitters may wish to indicate grounds for withholding specific information contained in their submission, such as the information is commercially sensitive or they wish personal information to be withheld. Any decision to withhold information requested under the OIA is reviewable by the Ombudsman.

Submission:[1]

Details supporting your views:

Te Ohu Kaimoana's Response to the Review of Sustainability Measures for the 1 October 2022/2023 fishing year

Please continue on a separate sheet if required.

[1] Further information can be appended to your submission. If you are sending this submission electronically we accept the following formats – Microsoft Word, Text, PDF and JPG.

21 July 2022

IWI COLLECTIVE
PARTNERSHIP

2022 Sustainability Review
Fisheries Management, Fisheries New Zealand
P O Box 2526
Wellington 6140

By email only: FMSubmissions@mpi.govt.nz

Tēnā koe,

REVIEW OF SUSTAINABILITY MEASURES FOR 1 OCTOBER 2022

1. Background
Fisheries New Zealand seeks feedback on proposed changes to the sustainability measures for various selected fish stocks from 1 October 2022. Submissions close 5pm, 22 July 2022.

The Iwi Collective Partnership (ICP) administers Annual Catch Entitlements (ACE) on behalf of its 19 iwi members listed in Table 1 below. We have interests in and submit on the following stocks under review:

- Hoki HOK 1
- Scampi SCI 1
- Gemfish SKI 3 & 7
- Rough and smooth skates RSK 8 & SSK 8
- Blue warehou WAR 2 & WAR 8

We have submitted separately on the East Coast Tarakihi review.

2. Submission Views
We provide our views in this section. We support the individual submissions of our iwi members.

2.1 Hoki (HOK 1)
The ICP supports quota owner and industry initiatives through DeepWater Group that help us to better understand and respond to fisheries management of Hoki. We support the view that HOK 1 comprises of a single panmictic stock and should be managed as such. The biomass of a single hoki stock is estimated to be 40% B0 or higher, which is within the target range of 35-50% B0. Therefore, the ICP supports a continuation of the increased level of self-management for the October 2022 fishing year that applied last year.

During the 2021-22 fishing year, the TACC was set at 110,000 t (with limits of 65,000 t from East and 45,000 t from West. Industry agreed to manage catches to the stricter level of 100,000 t (with limits of 55,000 t from East and 45,000 t from West). We support this approach once again.

We also note:

- Support for the submissions of DeepWater Group and Te Ohu Kaimoana.
- If the TACC is formally reduced, it will eliminate the opportunity for carry-forward ACE, that resulted not from biomass catch issues but from labour shortages this current season.

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2.2 Scampi (SCI 1)

We are pleased to read the science that the SCI 1 fishery is in a good state with a high biomass that is likely above the target biomass supported by the highest CPUE in 20 years. Therefore, SCI 1 is at a biomass that supports increased utilisation.

The ICP is supportive of the more conservative 10% TACC increase under Option 2. We have consistently supported the conservative approach to fisheries management of Scampi. We understand that DeepWater Group supports the greater increase under Option 3, which we are not opposed to. We do not support status quo.

We also note:

- That scampi is harvested by trawl method but from soft sediment seabed surfaces.
- Nil observed mammal interactions.

ICP Iwi	Iwi Quota Owning Entity
Ngati Porou	Ngati Porou Seafoods Limited
Te Arawa	Te Arawa Fisheries Holding Company Limited
Ngai Te Rangi	Ngai Te Rangi Fisheries AHC Limited
Ngati Awa	Ngati Awa Asset Holdings Limited
Whakatohea	Whakatohea Fisheries Asset Holding Company Limited
Taranaki Iwi	Taranaki Iwi Fisheries Limited
Ngati Tuwharetoa	Ngati Tuwharetoa Fisheries Holdings Limited
Ngaitai	Te Kumukumu Limited
Nga Rauru Kiitahi	Te Pataka o Tangaroa Limited
Ngati Ruanui	Ngati Ruanui Fishing Limited
Ngati Whare	Ngati Whare Holdings Limited
Te Rarawa	Te Waka Pupuri Putea Limited
Rangitaane	Rangitane o te Ika a Maui Limited
Ngai Tamanuhiri	Ngai Tāmanuhiri Asset Holding Company Limited
Rongowhakaata	Rongowhakaata Iwi Asset Holding Company Limited
Te Aitanga a Mahaki	Te Aitanga a Mahaki Trust Asset Holding Company Limited
Ngati Maru (Taranaki)	Ngati Maru (Taranaki) Fishing Company Limited
Ngati Manawa	Ngati Manawa Tokowaru Asset Holding Company Limited
Tapuika	Tapuika Holdings Limited

Table 1: ICP Iwi Members

2.3 Gemfish SKI 3 & 7

The science reports a significant increase in the biomass for SKI3 and SKI7, which is considered a single stock, and supports a case for increased utilisation. Therefore, the ICP is supportive of a conservative 20% TACC increase to the combined stock of SKI3 and SKI7 under Option 2, although we are not outright opposed to the greater TACC increase under Option 3.

We also note that due to high catch levels, there are deemed value costs that are inappropriate in situations when the TACC is set too low, particularly in what is largely a bycatch fishery. A higher TACC should go some way to relieving unfair deemed value costs.

2.4 Rough and Smooth Skates (RSK 8 & SSK 8)
The ICP supports a 43% TACC increase to RSK8 under Option 2, and a conservative 53% TACC increase to SSK8 under Option 2. We are not opposed to a greater increase to SSK8 under Option 3.

We also note:

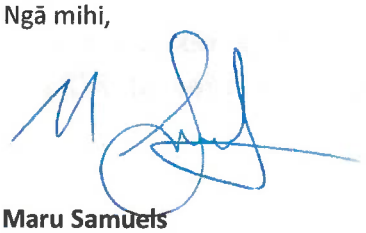
- There is limited knowledge about the status of these stocks only that it is largely a bycatch fishery, and that catch is increasing.
- Given the limited knowledge, the stocks should be monitored and reviewed.

2.5 Blue Warehou (WAR 2 & WAR 8)
The ICP supports a 55% TACC reduction to WAR2 under Option 2, and a 31% TACC reduction to WAR8 under Option 2. It is difficult to assess the true extent of the fishery given the limited knowledge. Therefore, we have taken the conservative middle ground that supports a TACC reduction in both cases but not to the higher levels proposed under Option 3 for both stocks.

We also note:

- Our support for Te Ohu Kaimoana's submission concerning the impact of 28N rights on Settlement Quota.

Ngā mihi,



Maru Samuels
CEO, Iwi Collective Partnership

Mob
DDI:
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22 July 2022

Submission: Review of Sustainability Measures for the FMA 7 mixed trawl fishery (Snapper - SNA 7, Red Gurnard - GUR 7 and Rig - SPO 7) for 2022/23

Recommendations

1. **The submitters support** the Minister taking an ecosystem-based approach to managing the mixed finfish fishery of snapper, red gurnard and rig in FMA 7, taking into account the vulnerabilities of the interdependent species that are not currently under review and apply a balanced approach to setting TACs for GUR 7, RIG 7 and SNA 7 based on the best available information.

2. **The submitters recommend** the Minister makes the following decisions –
    a. **In GUR 7,** retain the current Total Allowable Catch (TAC), no change to settings.
    b. **In SPO 7,** retain the current Total Allowable Catch (TAC) for rig, no change to settings.
    c. **In SNA 7** increase the Total Allowable Catch (TAC), the Total Allowable Commercial Catch (TACC), the allowance for fishing related mortality and adjust the recreational daily bag limit as follows -
        i. Increase the TAC from 645 tonnes (t) to 688 t.
        ii. Increase the TACC from 350 t to 380 t.
        iii. Retain the tonnage set aside to allow for Māori customary interests at 20 tonnes.

iv. Retain the tonnage set aside to allow for recreational fishing interests at 250 t.
v. Increase the tonnage set aside to allow for fishing related mortality from 25 t to 38 t.
vi. Initiate a process to change the individual recreational daily bag limit applying in FMA 7 as follows:
    1. Increase the DBL from 3 to 6 in the Marlborough Sounds; and
    2. Decrease the DBL in the remainder of FMA 7 from 10 to 6.
vii. Review the mixed finfish fishery in FMA 7 in 3 years' time to monitor any impacts of regulatory change, climate change and commercial fishing behaviour change due to onboard cameras and land-all catch.

3. **We recommend** the Minister facilitate a transition from indiscriminate bulk harvesting methods, such as towing trawl nets, as will become necessary in a 21st century decarbonised fishing industry under New Zealand's Emissions Reduction Plan (2022).

The submitters

4. The New Zealand Sport Fishing Council (NZSFC) appreciates the opportunity to submit on the review of sustainability measures for the FMA 7 mixed trawl fishery (Snapper - SNA 7, Red Gurnard - GUR 7 and Rig - SPO 7). Fisheries New Zealand (FNZ) advice of consultation was received on 14 June 2022, with submissions due by 22 July 2022.

5. The NZSFC is a recognised national sports organisation of 55 affiliated clubs with over 36,200 members 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.

6. The New Zealand Angling & Casting Association (NZACA) is the representative body for its 35 member clubs throughout the country. 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.

7. The New Zealand Underwater Association is comprised of 43 clubs nationally who represent a cohort of approximately 160,000 participants in underwater activities in New Zealand. These activities include diving, snorkelling, freediving, fin swimming,

underwater hockey, spearfishing, underwater photography, underwater rugby, ghost diving marine clean up and Experiencing Marine Reserves. Through our membership we are acutely aware that the depletion of inshore fish stocks has impacted on the marine environment and our members' wellbeing.

8. Collectively we are *'the submitters'*. The submitters 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].

9. Our representatives are available to discuss this submission in more detail if required. We look forward to positive outcomes from these reviews and would like to be kept informed of future developments. Our contact is Helen Pastor,

Background

10. Snapper occupy a wide range of habitats, including rocky reefs and areas of mud and sandy bottom. They are serial spawners, releasing many batches of eggs during spring and summer. Snapper first reach maturity from 20 to 28 cm fork length at 3-4 years of age. The snapper from Tasman Bay/Golden Bay (and the west coast North Island) grow faster and reach a larger average size than elsewhere.

11. There is an updated stock assessment and 5-year projections for SNA 7 showing a significant and sustained increase in biomass following some particularly good years of recruitment (young fish entering the fishery). These year classes are poorly estimated as they have only been observed once (2018 year class) or twice (2017 year class) in the trawl survey series and have not yet appeared in the commercial fishery.

12. A management review in 2020 increased the TACC by 100 tonnes (t) to 350 t, the recreational allowance stayed at 250 t and customary allowance stayed at 20 t.

13. Red gurnard have a fast growth rate and relatively short lifespan, and fluctuations in recruitment may result in large fluctuations in stock biomass. The Fisheries Plenary concluded that the trawl survey data since 1992 was a better index of trends in abundance than the commercial CPUE time series, however no new trawl survey data is available this year.

14. The catch limits for red gurnard in GUR 7 have increased frequently.

- 2015 - a TAC increase from 855 to 919 tonnes, a TACC increase from 785 to 845 tonnes.
- 2017 - a TAC increase to 1065 tonnes, and a TACC to 975 tonnes.
- 2019 - a TAC increase to 1176 tonnes, and the TACC to 1073 tonnes and the recreational allowance increased from 25 t to 38 tonnes.
- 2020 - a TAC increase to 1295 tonnes, and the TACC to 1180 tonnes.
- 2021 - a TAC increase to 1422 tonnes, and the TACC to 1298 tonnes and the recreational allowance increased to 42 t.

15. The first quantitative stock assessment was carried out for GUR 7 in 2022. It was based on commercial catch data and trawl survey results only. There was no explicit allowance for unreported catch, recreational catch, or customary catch (Figure 2).

16. Rig or spotted dogfish in SPO 7 are mainly caught by trawl and in a target set net fishery along with other shark species, including school shark and spiny dogfish. Set net restrictions to protect Hector's dolphins have reduced the available fishing area for rig in SPO 7.

17. Rig are found throughout New Zealand waters. They can make extensive migrations and move into shallow areas to give birth before returning to waters up to depths of 400 m in autumn. Farewell Spit is a known nursery ground for rig in Tasman Bay and Golden Bay. Rig feed on a variety of benthic invertebrates, particularly crustaceans, echiurans and molluscs.

18. An assessment of the relative abundance of rig was completed in 2022 based on the West Coast South Island trawl survey series and two standardised abundance indices based on reported commercial catch rates (CPUE) (Figure 3). The May 2022 Plenary Report concludes that SPO 7 is about as likely as not (40-60%) to be at or above the proxy management target. Overfishing is also about as likely as not to be occurring.

Proposal

19. Proposal here

20. Fisheries New Zealand (FNZ) propose the following options for the Total Allowable Catch (TAC), Total Allowable Commercial Catch (TACC) and associated allowances of the FMA 7 mixed trawl fishery. Any changes will apply from 1 October 2022. (Table 1)

Table 1: Proposed management options (in tonnes) for SNA 7, GUR 7 and SPO 7 from 1 October 2022.

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
SNA 7	Option 1 *(Status quo)*	645	350	20	250	25
	Option 2	743 ↑ (102 t)	450 ↑ (100 t)	20	250	23 ↓ (2 t)
GUR 7	Option 1 *(Status quo)*	1,422	1,298	17	42	65
	Option 2	1,582 ↑ (160 t)	1,450 ↑ (152 t)	17	42	73 ↑ (8 t)
SPO 7	Option 1 *(Status quo)*	373	298	15	33	27
	Option 2	371 ↓ (2 t)	315 ↑ (17 t)	15	25 ↓ (8 t)	16 ↓ (11 t)

21. Option 1 for SNA 7, GUR 7 and SPO 7 represents the status quo, no change.

22. SNA 7 option 2 - **There is an error** in the summary table above, (Table 1). The proposed increase in the TAC is **98 t not 102 t**. The proposed increases represent a 15% TAC increase, a 100 t or 29% increase to the TACC and an 8% decrease to other mortality.

23. GUR 7 option 2 - 11% increase to the TAC, 12% increase to the TACC, and a 12% increase to the allowance for other mortality.

24. SPO 7 option 2 - 0.5% decrease to the TAC, 6% increase to the TACC, 24% decrease to the recreational allowance, 41% decrease to the allowance for other mortality.

25. The level of Māori customary harvest in these stocks is unknown, FNZ assume it is well within the current allowances.

26. The best available information on recreational harvest is from the National Panel Survey 2017-18. Estimated annual recreational harvest in SNA 7 is 147 t (CV+/- 15), GUR 7 is 38 t (CV +/- 3), and SPO 7 is 19 t (CV +/- 5).

Ecosystem-based fisheries management

27. As noted by the Prime Minister's Chief Science Advisor (PMCSA), there are many parts of the Fisheries Act 1996 (the Act) that remain under-used and this submission advocates for better use of sections 9 and 10 of the Act. Full use of these principles will take the government along the path to more ecosystem-based and precautionary decision making, meeting the objectives and principles of the Oceans and Fisheries portfolio and the recently announced Oceans Vision. In this submission we apply sections 9 and 10 to this process to ensure that matters of uncertainty, precaution, and the obligation to following generations are given obligatory weight.

28. The move from single species stock assessments for a limited number of species determining catch settings to an ecosystem considered process for setting catch limits is supported by both the Minister and the PMCSA.

29. For stocks in a mixed fishery appropriate, precautionary catch settings must be applied to each stock. However, it is impractical to attempt to maximise catches in a mixed species fishery when the availability and productivity of the species are dissimilar. In these circumstances it will always be necessary to leave a dominant species (such as snapper) more abundant to protect the more vulnerable from depletion. In FMA 7 affected species include snapper, red gurnard, rig, flatfish, tarakihi and John dory. Juvenile hāpuku are also caught in this mixed trawl fishery.

30. SNA 7 and GUR 7 commercial catch cannot be increased by the amounts proposed by FNZ without risking over catch of tarakihi, John dory, and flatfish species also taken by single trawl. These associated and potentially interdependent species are not in a similar state of abundance as snapper. Fisheries New Zealand is only just starting to try and quantify the ecosystem impacts of bottom trawling, and we cannot make risky increases when these fish stocks have vastly differing productivity and stock status.

31. The submitters support the shift towards more holistic management of our oceans based on a set of principles including taking a precautionary approach to achieve the Government's objective of promoting "an ecosystem-based approach to research, monitoring and management", we recommend the Minister facilitate the transition of the snapper and rig fisheries in FMA 7 into commercial bottom longlining.

Impacts of trawling

32. The submitters are deeply concerned about the effects of trawling on inshore biodiversity and productivity. The prospect of an increased number of trawl tows and a larger trawl footprint will have an unknown and unmeasured detrimental effect on the benthic environment. There is poor understanding of the impacts of trawling, such as the effect on benthic habitats and resuspension of fine sediments.

33. FNZ do not envisage a substantial increase in trawling for snapper as they note that commercial fishers have shifted to deeper water and reduced the headline height of trawl gear to minimise catch.

34. Historically, there have been major issues with discards and dumping in the southern trawl fisheries. The Heron report (2016) revealed that senior officials were aware of

widespread dumping and failed to act. Fast forward to 2022 and taking account of the prospect of onboard cameras, and the uncertainty in how trawl effort may change relative to a TACC increase, it does not make sense for Fisheries NZ to be proposing a TACC increase while also suggesting a reduction in the allowance set aside to account for fishing related mortality. The Inshore Fisheries Assessment Working Group decided that a 10% allowance for other fishing mortality was the best estimate for use in the SNA 7 stock assessment. FNZ proposes the reduction based on moving towards having an allowance for other mortality at 5% of the TACC. The Minister cannot take this proposal seriously.

35. In a mixed trawl fishery of species with varying characteristics and variable productivity the tonnage set aside to allow for fishing related mortality must be a minimum of 10% of the TACC.

36. We submit the Minister makes a precautionary decision considering the impacts of trawling and applies the following -
    a. No change to the TACCs for red gurnard and rig;
    b. A modest TACC increase of 30 t for snapper;
    c. Increases the other mortality allowance to 10% of the TACC; and
    d. Commits to a review within 3 years to monitor catches, behaviour, and fishery performance.

37. The submitters acknowledge there are a limited number of commercial fishers actively trying to reduce their environmental impact from trawling. The transition from indiscriminate bulk harvesting methods, such as towing trawl nets for 4 hours or more will not be easy, but is necessary in a 21st century decarbonised fishing industry under New Zealand's Emissions Reduction Plan (2022).

38. Currently, change is driven by a few dedicated innovators. Change is long overdue, yet we know that high value, higher quality catch using more selective fishing methods only becomes viable with biomass at higher levels. A precautionary approach to TACC increases now will enable fisheries managers to monitor if there is any increase in abundance and review catch settings in the future.

Discussion SNA 7 and GUR 7

39. If the Minister is to invoke the precautionary principle he will need to be provided with ALL the best available information and resist the pressure to apply option 2, the TAC and TACC increases, as proposed by Fisheries New Zealand and commercial interests.

40. We strongly object to this process where there are only two options presented in the discussion paper - the status quo or substantial increases as proposed by commercial interests - a 100 t TACC increase in SNA 7 and 152 t increase in GUR 7.

41. Historically, we were presented with more than one option for change and a raft of data to support those options or any other option that submitters can justify. The poor quality of recent proposal papers combined with the lack of supporting data denies many submitters the opportunity to make informed comments. Once again, this behaviour points towards a ministry captured by the commercial sector that it is supposed to be regulating.

42. Is productivity changing? The new stock assessments were accepted by the Plenary, and both show significant increasing trends since 2010. Data from the biannual trawl survey are influential in these trends and predict continued high recruitment in SNA 7. If these stocks are heading towards or exceeding the estimate of unfished biomass (B_0) while being fished at a high rate, then it raises questions about the veracity of the model assumptions, how useful is using a percentage of B_0 for setting management targets, and do we underestimate the potential for stock abundance to return, if given a chance? (Figure 1)

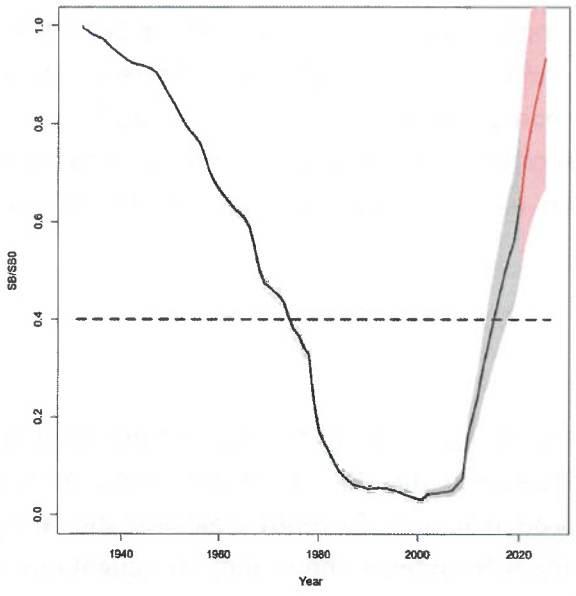

Figure 1: Results of the 2022 SNA 7 stock assessment showing the relative size of the spawning stock biomass compared to the estimate of unfished biomass in 1935. The dotted line is the interim stock target of B40 (40% of the unfished biomass). The red line is the estimated future biomass over the next 5 years (2021–2025) based on current catch and the shaded area is the model uncertainty.

43. The updated stock assessment for SNA 7 is strongly influenced by the high estimates of recent recruitment of the 2017 and 2018 year classes, resulting in an increase in

total biomass during the projection period (Figure 1). These year classes are poorly estimated as they have only been observed once (2018 year class), or twice (2017 year class), in the trawl survey series and have not yet appeared in the commercial fishery.

44. FNZ are proposing changing the TACs for SNA 7 and GUR 7 based on the new information in the Plenary reports but then offer the Minister, tangata whenua, stakeholders, and others just a single management option of large a TACC increase for both stocks. This is so unreasonable it raises the following questions for FNZ:
    a. Was the TACC increase for snapper of 100 t, plus 10 t for other sources of fishing mortality, the only option assessed using the stock assessment?
    b. How was 100 t selected over any other option? ; and
    c. Where is the rationale and range of projections for selecting that as the only option for SNA 7?

45. There appears to be a case for a TAC increase in SNA 7 based on the updated stock assessment and ongoing good recruitment. The submitters support an alternative option of 30 t be offered to the Minister, as this will better align with taking a precautionary approach and our recommendations for GUR 7 and SPO 7.

46. The first quantitative stock assessment was carried out for GUR 7 in 2022. It was based on commercial catch data and trawl survey results only. There was no explicit allowance for unreported catch, recreational catch, or customary catch. For the base case and with current commercial catch, stock abundance is predicted to decline during the 5 year projection period, although the biomass remains at high level throughout the period (Figure 2).

SNA 7 recreational daily bag limit

47. FNZ are recommending large increases in the SNA 7 TAC and the submitters expect that some of the benefits of the increase in the SNA 7 stock are shared with the recreational fishers in the Marlborough Sounds. Currently their recreational bag limit is 3 snapper per person - even if the fish landed in the Sounds are caught outside the Sounds where the bag limit is 10 per person.

48. We have recommended the Minister initiate a process to change the individual recreational daily bag limit applying in FMA 7 as follows:
    a. Increase the DBL from 3 to 6 in the Marlborough Sounds; and
    b. Decrease the DBL in the remainder of FMA 7 from 10 to 6.

49. The submitters have made the recommendation for a 6 DBL on the basis that it supports earlier comments from the Marlborough Recreational Fishers Association. However, we believe the Minister would be justified in consulting on a DBL of 7 per person, per day, to align with fishing opportunities in SNA 1 and given the increasing abundance of snapper.

GUR 7 projected decline

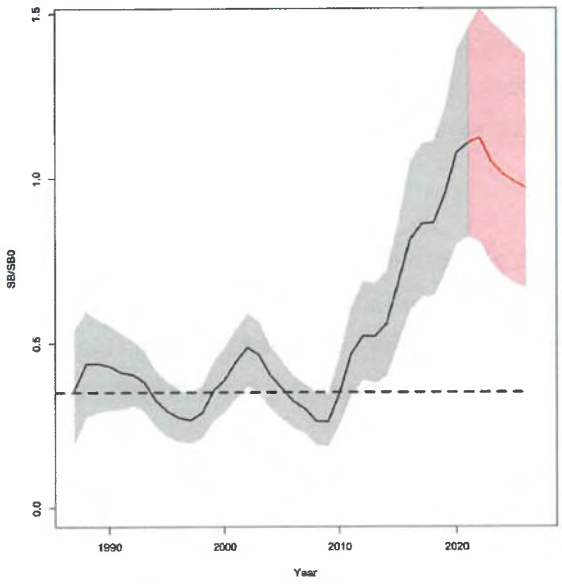

Figure 2: Results of the 2022 GUR 7 stock assessment showing the relative size of the spawning stock biomass compared to the estimate of exploited biomass in 1985. The dotted line is the interim stock target of B35 (35% of the unfished biomass). The red line is the estimated future biomass over the next 5 years (2021–2025) with a TACC of 1,298 t with no allowance for other sources of fishing mortality and the shaded area is the model uncertainty.

50. Questions for Fisheries New Zealand -
    a. How was the proposed GUR 7 TACC increase of 152 t, plus 8 t for other sources of fishing mortality selected over any other option?
    b. Where is the data to support a 12% increase to the TACC?
    c. On what basis is the allowance for fishing related mortality set at 5% of the TACC?

51. In a mixed trawl fishery, the Minister must set aside an allowance for fishing related mortality that equates to a minimum of 10% of the TACC.

52. The FNZ Discussion Document states that no projections for the 152 t increase or any others were undertaken. This is not good enough, especially when FNZ has also failed to tell tangata whenua, stakeholders, and others that GUR 7 is projected to decline by about 15% over five years with the TACC at the current level of 1,298

tonnes. with no allowance for other sources of fishing mortality, customary or recreational catch. No doubt if an extra 800 t of gurnard were caught over the next five years the decline would be much greater. Indications are that recruitment has been low over the last few years. Where is the rationale for selecting the 152 t increase given the predicted decline?

53. We submit the Minister must be informed that the GUR 7 stock is predicted to decline if the TACC is increased by 152 t on 1 October 2022.

54. Historically, gurnard stocks have periodic cycles of stock increases and declines. Given the current decline in recruitment, and the management options presented in the discussion document, the submitters must support no change to the TAC for GUR 7 in 2022.

55. There have been five GUR 7 TACC increases over the last 7 years and the increase proposed in 2022 is by far the largest. If large multi-species TACC increases based on a selection of available data are proposed to trigger pre-set decision rules, then this document is another excellent case study that supports the submitter's opposition to automated decision rules.

Discussion Rig 7 (SPO 7)

56. For SPO 7, set net catch has declined, from 64% of the catch to 31% in 2018, with the balance taken up by bottom trawl and (in the most recent three years) Danish seine nets. On 1 October 2020, new commercial and recreational set net fishing closures out to 4 nautical miles offshore took effect within Golden Bay and Tasman Bay, from Farewell Spit to Cape Soucis (Raetihi).

57. An assessment of the relative abundance of rig concluded that SPO 7 is about as likely as not (40-60%) to be at or above the proxy management target. Overfishing is also about as likely as not to be occurring.

58. The May 2022 Plenary report also highlighted the contradiction in the declining trend in the trawl survey data with the increasing trend in CPUE (Figure 3). There has been a decline in setnet fishing effort in Tasman Bay and Golden Bay (area 038) in recent years, and the Plenary concludes that this CPUE index is no longer useful as a measure of rig relative abundance (blue line Figure 3).

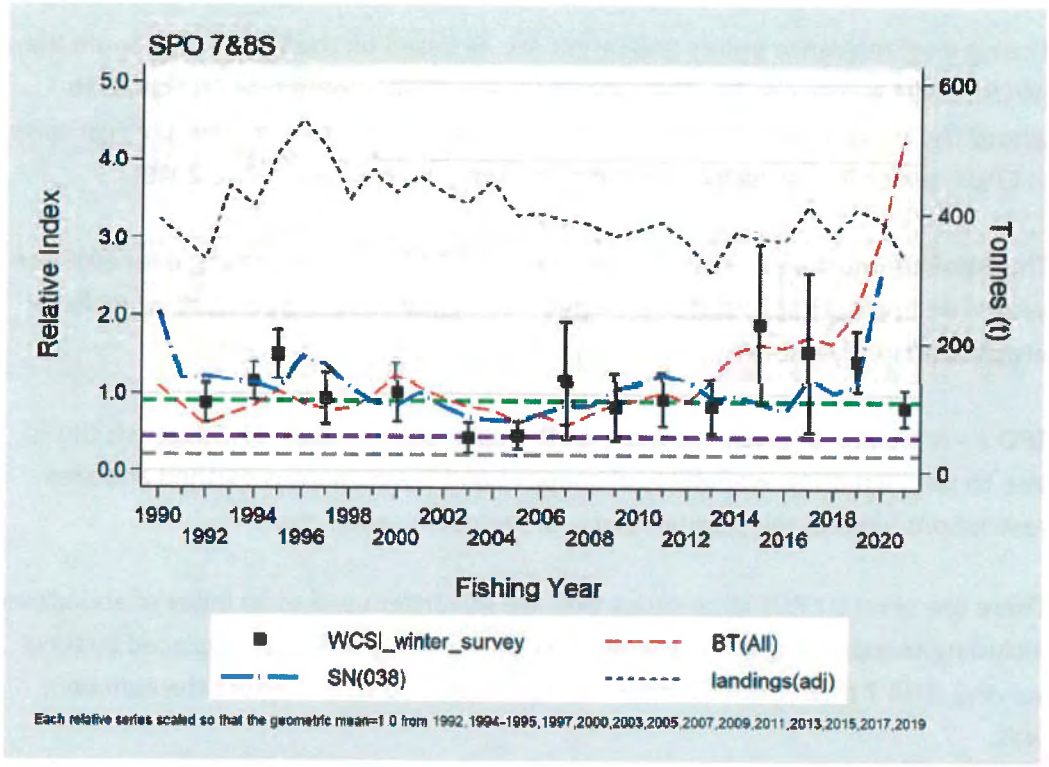

Figure 3: Comparison of the west coast South Island (WCSI) trawl survey and two accepted CPUE indices BT(All) and SN(038) with the adjusted QMR/MHR landings for SPO 7. Adjustments were made to ensure that all catch values in every year are based on a common conversion factor. The agreed Soft Limit (average: 2003 and 2005 WCSI survey biomass estimates=0.49) is shown as a purple line, and the calculated BMSY proxy (=2×Soft Limit) is shown as a green line and the calculated Hard Limit (=0.5×Soft Limit) is shown as a grey line. The 2021 index value for the SN(038) analysis (blue dashed) was dropped because it was based on a single vessel.

59. In 2018 the inshore trawl fleet transitioned to electronic and geospatial position reporting of effort, catch and fine scale fishing location. When more detailed catch reporting has been introduced in the past there has been a change in reporting behaviour which affects Catch Per Unit of Effort (CPUE). For example, when trawl catch and effort reporting transitioned from daily reporting (CELRs) to tow by tow reporting (TCEPRs) the difference is significant, and the CPUE time series is split between reporting forms. The rig CPUE analysis does not split these form types but makes some adjustments for daily catch and prorating catch across trips.

60. The massive rise in trawl CPUE of rig only occurs after 2018 and the introduction of electronic reporting and so **must be treated with caution** (red line Figure 3).

61. Historically, there have been problems with commercial fishers reporting rig catch as processed weight not whole weight as required on the forms. Changes in how fishers report catch using the various electronic platforms available have been problematic in several fisheries.

62. The rig limit reference points and target are all based on the West Coast South Island (WCSI) trawl survey results. The submitters are disappointed that FNZ chose to ignore the trend in recent trawl survey results in favour of an implausibly high spike in CPUE, which increases by two and a half times over 3 years since 2018.

63. **The Minister must be advised that a shark stock biomass increasing over 80% per year is an implausible result and should be flagged as such to ensure he makes a precautionary decision.**

64. SPO 7 - recreational catch has been on the decline since 2000. FNZ suggests this is due to the increasing availability of snapper and the numerous method and area restrictions limiting the traditional use of set nets to catch rig.

65. There are several CPUE time series that are no longer used as an index of abundance, including snapper longline in the Hauraki Gulf and Bay of Plenty (replaced by trawl survey), SNA 7 trawl from October to December, and GUR 7 where the comment was:

    "The Plenary concluded in 2021 that the GUR 7 trawl survey time series is a better index of trends in abundance than the CPUE time series, primarily because it is more consistent through time and is not affected by changes in fishing behaviour."

66. The submitters support Option 1, to retain the current TAC for SPO 7 on the basis that best available information must be used, and when that information is uncertain, unreliable, or inadequate a precautionary decision must be made. And taking into account the following -

    a. There is a declining trend in the WCSI trawl survey index which is more reliable than the recent trawl CPUE index of relative abundance.

    b. The TACC has been under caught since 2018-19.

    c. Rig can be released alive by commercial fishers under the current provisions in the Fisheries Act (Schedule 6); and

    d. The Minister must give effect to s10 in the Fisheries Act by using best available information when making his decision.

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22 July 2022

Submission: Review of Sustainability Measures for Blue Cod (BCO 7) for 2022/23

Recommendations

1. **The Minister of Oceans and Fisheries** removes BCO 7 from this consultation period due to missing information, and reviews management and catch settings in 2023 taking into account best available information.

2. **If the Minister chooses to proceed,** we urge the Minister to make precautionary decisions for BCO 7 by -

    a. Setting the Total Allowable Catch (TAC) at **155.4** tonnes.
    b. Setting a conservative TACC based on an average of the past 10 year's catches minus 25%. **Setting the TACC at 54 tonnes.**
    c. Setting aside an allowance for recreational fishing interests based on an average across most recent recreational BCO 7 survey results. **Setting aside 69 tonnes to allow for recreational fishing interests.**
    d. Setting aside 27 tonnes to allow for Māori customary fishing interests.
    e. Setting aside **5.4 tonnes** to allow for other mortality.

The submitters

3. The New Zealand Sport Fishing Council (NZSFC) appreciates the opportunity to submit on the review of sustainability measures for blue cod 7 (BCO 7). Fisheries New Zealand (FNZ) advice of consultation was received on 14 June 2022, with submissions due by 22 July 2022.

4. The NZSFC is a recognised national sports organisation of 55 affiliated clubs with over 36,200 members 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.

5. The New Zealand Angling & Casting Association (NZACA) is the representative body for its 35 member clubs throughout the country. 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.

6. The New Zealand Underwater Association is comprised of 43 clubs nationally who represent a cohort of approximately 160,000 participants in underwater activities in New Zealand. These activities include diving, snorkelling, freediving, fin swimming, underwater hockey, spearfishing, underwater photography, underwater rugby, ghost diving marine clean up and Experiencing Marine Reserves. Through our membership we are acutely aware that the depletion of inshore fish stocks has impacted on the marine environment and our members' wellbeing.

7. Collectively we are '*the submitters*'. The submitters 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].

8. Our representatives are available to discuss this submission in more detail if required. We look forward to positive outcomes from these reviews and would like to be kept informed of future developments. Our contact is Helen Pastor,

Background

9. Blue cod (rāwaru) are a taonga species for tangata whenua in the South Island. They are important ecologically and are a highly prized catch for their eating qualities. Nationwide around 293 tonnes of blue cod is harvested by recreational fishers annually. Nearly 80% of all recreational harvest is taken from three Quota Management Areas: BCO 3, 5 & 7.

10. Blue cod 7 commercial catch data is available from 1931. Blue cod was introduced into the Quota Management System (QMS) in 1986. In Blue cod 7 (BCO 7), the Total Allowable Commercial Catch (TACC) has been set at 70 t (tonnes) since 1995, with a decrease to 50 t only for the 2004-05 fishing year. BCO 7 annual commercial landings have averaged around 55 t of the TACC between 2000 and 2021, around 78.5% of the TACC.

11. Blue cod reach an average size of 30-40cm, but can reach 60cm in length.

12. A National Blue Cod Strategy was published by Fisheries New Zealand (FNZ) in 2018. FNZ has no immediate plans to protect important spawning or benthic habitats, those measures will be addressed later, while wider habitat and ecosystem impacts will be addressed in the longer-term plan. An outcome from the planning process was the development of a traffic light system and regulation changes to manage recreational fishing in BCO 3. During 2019-20 FNZ managed a Technical Working Group process to develop the traffic light system and discuss regulatory changes. Local New Zealand Sport Fishing Council (NZSFC) club representatives and fishers contributed time and resources to the Working Group process.

13. Local representatives were expecting further consultation with FNZ on proposed regulatory measures, which did not occur, and what has emerged from that process is unsatisfactory. The outcomes do not align with earlier agreements and there are serious concerns of non-compliance by recreational fishers due to the widespread perception that the traffic light system and regulations are unfair and complex.

14. The Minister must be made aware of the widespread public concern about the mismanagement of blue cod and not make the mistake of making an adverse decision for the future management of BCO 7.

Proposal

15. Proposal here

16. **Table 1** - Fisheries New Zealand (FNZ) propose the following options for the Total Allowable Catch (TAC), Total Allowable Commercial Catch (TACC), and allowances in BCO 7 (in tonnes).

Table 1: Proposed management options (in tonnes) for BCO 7 from 1 October 2022.

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Current settings	-	70.005	-	-	-
Option 1	169	63 ↓ (7.005 t)	27	64	15
Option 2	157	58 ↓ (12.005 t)	27	58	14

17. **Option 1:** 51% decrease to TAC, 10% decrease to TACC, 64% decrease to recreational allowance, customary allowance status quo, 78% decrease to other mortality.

18. **Option 2:** 54% decrease to TAC, 17% decrease to TACC, 67% decrease to recreational allowance, customary allowance status quo, 80% decrease to other mortality.

Discussion

19. We reject the proposal on the basis that there is missing information about the BCO 7 fishery, and the most recent information concerning BCO 7, Marlborough Sounds, is still under review.

20. The Fisheries New Zealand discussion document justification of 'setting' a Total Allowable Catch does not match recent plenary (page 151) or historical information of Total Allowable Catch (page 6), or the National Blue Cod strategy, of BCO 7, where a TAC had already been set at 343 tonnes a TACC of 70 t, recreational allowance of 177 t, and customary non-commercial allowance of 27 t. While we understand this change was announced by the Minister in 2003, it is unclear why they were not gazetted. Fisheries New Zealand have been using the TAC and other allowances in their plenaries and blue cod-related plans.

21. There is confusion over the catch settings applying in BCO 7. It is totally inadequate for Fisheries New Zealand to issue a discussion paper that does not include accurate details. The submitters object to such fundamental details being omitted or worse, misrepresented. Submitters cannot be expected to respond to inaccurate data.

22. The Minister has a statutory duty to decide based on best available information. That information also needs to be made available to the public so we can make an informed submission. Given the lack of accurate data supplied the Minister is obliged

to forgo this process and direct Fisheries New Zealand to reissue more complete consultation papers later.

23. From the available data we submit our comments on the basis that the Total Allowable Catch (TAC), allowances set aside for Māori customary and recreational fishing interests and other mortality, and the Total Allowable Commercial Catch (TACC) are as described in Table 1 below.

24. **Table 2** – Catch settings in the blue cod fish stocks as of October 1st, 2021. (Source: Fisheries New Zealand Plenary, May 2022)

Table 1: Recreational and Customary non-commercial allowances (t), other mortality (t), TACCs (t), and TACs (t) for blue cod by Fishstock as at 1 October 2021.

Fishstock	Recreational Allowance	Customary non-commercial allowance	Other mortality	TACC	TAC
BCO 1	2	2	–	46	46
BCO 2	–	–	–	10	10
BCO 3	83	20	10	130	243
BCO 4	20	10	40	759	829
BCO 5	85	20	20	800	925
BCO 7	177	27	69	70	343
BCO 8	188	2	2	34	226
BCO 10	–	–	–	10	10

25. The rationale for a decrease in the TACC and the recreational allowance is that recent potting survey data estimates very high fishing mortality in some areas.

26. Recent information shows the Marlborough Sounds area has been overfished, but BCO 7 is a large QMA including areas with difficult access and limited fishing effort.

27. We suggest a conservative approach to blue cod management that reflects the desires of different fishing interests.

28. As the TACC has only been caught twice in the past 20 years, we strongly suggest a decrease in TACC based on 25% of the average landings over the past decade.

29. The current stock status of BCO 7 is currently in relation to a target has been the subject of recent stock assessment plenary meetings, and overfishing is likely to be occurring.

30. Commercial landings from the past 3 years is on average around 59 tonnes, 11 tonnes less than the current commercial catch limit of 70 tonnes.

31. According to the 2015/16 NIWA aerial survey, the recreational harvest from BCO 7 in 2015–16 was about half that in 2005/06, almost with all the decrease being in the

Marlborough Sounds. 2015/16 aerial survey showed average recreational catch estimated to be 75 tonnes, compared to 149 tonnes in the 2006 survey.

32. The last National Panel Survey was conducted in the 2017/18 fishing year, showing recreational catch at 63 tonnes, compared to the NPS in 2011/12 where recreational catch tonnage was 77 tonnes. The daily bag limit (DBL) in the Marlborough Sounds has remained at 2 per person per day since 2011, whereas the DBL was changed in 2020 for the Kahurangi area to 10 and the Westland area to a DBL of 15.

33. The combined aerial and NPS surveys show recreational catch has steadily decreased over time.

34. In the Marlborough Sounds, the prominent recreational fishing area for blue cod in BCO 7, FNZ have stated 'recent changes', such as the implementation of traffic light system under a red setting, means there is a predicted increase in biomass over the coming years.

35. Local fishers still object to the process FNZ undertook to implement the National Blue Cod Strategy, and, the resultant 'Traffic Light System", (TLS). FNZ implemented the TLS without discussing the significant changes with the Technical Working Group or engaging in the last stakeholder's consultation process advised earlier by FNZ. In the Marlborough Sounds a red light setting is in place, meaning a 2-DBL applies.

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22 July 2022

Submission to the review of sustainability measures for Red Gurnard 3 (GUR 3) for 2022–23

Recommendations

1. **We recommend the Minister of Oceans and Fisheries** makes a precautionary decision for the future management of GUR 3 as there is a predicted decline in spawning stock biomass over the next five years.

2. **The submitters recommend** the Minister makes the following decisions for the future management of Gurnard 3 (GUR 3) -
    a. Increase the Total Allowable Catch (TAC) from 1614 tonnes (t) to 1659 t.
    b. Retain the Total Allowable Commercial Catch (TACC) at 1500 t.
    c. Retain the tonnage set aside to allow for Māori customary interests at 3 t.
    d. Retain the tonnage set aside to allow for recreational fishing interests at 6.
    e. Increase the allowance set aside for fishing related mortality from 105 t to 150 t, 10% of the TACC.

3. **We recommend** the Government make meaningful changes towards its stated goal of more holistic management of our oceans based on a set of principles, including taking a precautionary approach to achieve the objective of promoting "an ecosystem-based approach to research, monitoring and management."

The submitters

4. The New Zealand Sport Fishing Council (NZSFC) appreciates the opportunity to submit on the proposals for the future management of Red Gurnard Fishery (GUR 3). Fisheries New Zealand (FNZ) advice of consultation was received on 14 June 2022, with submissions due by 22 July 2022.

5. The NZ Sport Fishing Council is a recognised national sports organisation of 55 affiliated clubs with around 36,200 members 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.

6. The New Zealand Angling & Casting Association (NZACA) is the representative body for its 35 member clubs throughout the country. 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.

7. The New Zealand Underwater Association is comprised of 43 clubs nationally who represent a cohort of approximately 160,000 participants in underwater activities in New Zealand. These activities include diving, snorkelling, freediving, fin swimming, underwater hockey, spearfishing, underwater photography, underwater rugby, ghost diving marine clean up and Experiencing Marine Reserves. Through our membership we are acutely aware that the depletion of inshore fish stocks has impacted on the marine environment and our members' wellbeing.

8. Collectively we are *'the submitters'*. The submitters 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].

9. Our representatives are available to discuss this submission in more detail if required. We look forward to positive outcomes from these reviews and would like to be kept informed of future developments. Our contact is Helen Pastor,

Background

10. Red gurnard was introduced into the Quota Management System (QMS) in 1986. Gurnard 3 (GUR 3) is a combination of Fisheries Management Areas 3, 4, 5 & 6.

11. GUR 3 is the largest commercial red gurnard fishery, with GUR 7 the next largest, in terms of catch.

12. Landings of red gurnard in GUR 3 have exceeded the TACC every year since 2005 despite the fact that commercial catch limits for red gurnard in GUR 3 have had large and regular increases over the last 6 years, as follows -
    a. 2013 - a TACC increase from 900 t to 1100 t.
    b. 2016 - a TACC increase from 1100 to 1220 tonnes.
    c. 2019 - a TACC increase to 1320 tonnes.
    d. 2021 - a TACC increase from 1320 t to 1500 tonnes.

13. Red gurnard have a fast growth rate and relatively short lifespan, and fluctuations in recruitment may result in large fluctuations in stock biomass.

14. Red gurnard in GUR 3 are taken almost entirely by bottom trawl in fisheries targeted at red cod, barracouta, and flatfish. Some red gurnard are also taken in the target tarakihi and stargazer bottom trawl fisheries. So, both inshore and deep water trawl fisheries.

15. FNZ advises that targeting of gurnard from the east coast of the South Island has increased from below 10% to around 25% since 2018.

16. We understand from previous surveillance reports that there is a preference for gurnard over 27cm as few were being landed into processing sheds. Also, the Heron report (2016) highlighted the common practice of discarding small gurnard from inshore trawl vessels.

Proposals for GUR 3

17. Proposal here

18. **Table 1** - Fisheries New Zealand (FNZ) propose the following options for the Total Allowable Catch (TAC), the Total Allowable Commercial Catch (TACC), and associated allowances in the GUR 3 fishery.

Table 1: Proposed management options (in tonnes) for GUR 3 from 1 October 2022.

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	1614	1500	3	6	105
Option 2	1695 ↑ (81 t)	1575 ↑ (75 t)	3	6	111 ↑ (6 t)

19. Fisheries New Zealand advises only small amounts of gurnard have been harvested by Māori customary fishers in the Gurnard 3 fishery. FNZ advises this may reflect that tangata whenua are using recreational fishing regulations for their harvest.

20. The National Panel Survey estimated recreational harvest at 2.01 t in 2012. The estimate in 2018 was 1.7 tonnes, well within the 6 t allowance. In FMA 3 the recreational daily bag limit for gurnard is 30 per person, per day, as part of the mixed species daily limit.

Discussion

Catch settings

21. The submitters do not support FNZ's Option 2, we suggest an amendment to Option 1, the status quo.

22. Landings of red gurnard in GUR 3 have exceeded the TACC every year since 2005 despite regular increases. It is clear that these regular TACC increases have failed to curb excess fishing effort and keep catches to statutory levels. Clearly there are other factors incentivising this overcatch. There are no proposals to change the deemed value rates applying in GUR 3.

23. GUR 3 catch was traditionally bycatch from other target trawl fisheries. We note that since 2018 commercial fishers on the east coast of the South Island have ramped up efforts to target gurnard.

24. It is implausible for commercial fishers and FNZ to argue that the excess catch in GUR 3 is unavoidable when the level of targeting in the east coast trawl fishery has increased from below 10% to around 25% since 2018.

25. If the Minister is to invoke the precautionary principle then he must use best available information and increase the TAC by 45 t and apply all of that increase to the allowance set aside to account for fishing related mortality.

26. As noted earlier, previous reports indicate an avoidable level of wastage of smaller gurnard. Increasing the tonnage set aside to allow for fishing related mortality from 105 t to 150 t will bring the allowance up to represent 10% of the TACC, a minimum application taking into account the historic wastage in this mixed trawl fishery.

27. Observer coverage on GUR 3 vessels has been, on average, below 5% in the past 5 years. The rollout plan for GUR 3 'cameras on vessels' is set to commence in June 2023. We recently submitted in support of the need for legislative and administrative changes to enable the rollout of cameras on commercial fishing vessels.

28. In future, once onboard cameras are operational, the Minister may be justified in setting aside a smaller percentage of the TAC to allow for other mortality. Not now.

29. The submitters do not accept FNZ's assertion that increasing the GUR 3 TACC "will increase the ability of fishers to target this species and may allow them to avoid bycatch of other less abundant species with overlapping depth profiles". The TACC for gurnard is already being regularly exceeded, any increase will only account for current overcatch, not provide for greater catches. For example, FNZ's Option 2 proposes a 75 t TACC increase, the Plenary reports GUR 3 catch for the 2020-21 year at 1646 tonnes. The previous year catch in excess of the TACC was 217 t.

30. Targeting of gurnard and other factors including the lack of any meaningful deterrents is the problem in GUR 3.

31. Any Ministerial decision to grant greater catches in GUR 3 would have to take into account the impact on other species in the mixed trawl fishery. The GUR 3 TACC could not be increased without also increasing the catches of red cod, giant stargazer, barracouta, tarakihi, and flatfish also taken by single trawl. These associated and potentially interdependent species are not in similar states of abundance to each other, especially east coast tarakihi, which has been assessed as below the management soft limit. Fisheries New Zealand are only just starting to try and quantify the effects of bottom trawling, and we cannot make risky increases when the associated fish stocks have vastly differing stock status.

32. Historically gurnard stocks have periodic cycles of stock increases and declines. Given the current decline in recruitment, and the management options presented in the discussion document, the submitters have opted to support no change to the TACC for GUR 3 and the 45 t increase in the TAC to be applied to the allowance for fishing related mortality.

33. The submitters urge the Minister to take a conservative approach for a number of reasons, including but not limited to the following -

    a. The majority of GUR 3 catch is inshore, in FMA 3. As catch overlaps with a variety of species, a conservative approach is required to mitigate impacts on other species which may not be in a similar state of abundance to red gurnard. There are high amounts of localised gurnard catch in the Flatfish 3 fishery, a fishery where flatfish stocks are predicted to vary in abundance in coming years.
    b. Best available information suggests a recent shift in fishing selectivity to juvenile red gurnard in shallower areas (10-30m) . In deeper areas, (30-400m), there is a lower availability of juvenile female fish, relative to male fish. Based on these two factors, it seems appropriate to manage the stock conservatively to let juveniles grow, resulting in better yield per recruit, giving environmental, social, and economic benefits.
    c. The FNZ plenary reports that "there is considerable uncertainty in the stock projections due to the uncertainty associated with the estimates of recent recruitment (especially the strong 2016 and 2019 year classes)".
    d. The 2022 quantitative stock assessment projections show the GUR 3 Spawning Stock Biomass (SSB) is likely to decrease over the next 5 years (Figure 1). And the annual fishing mortality rate is projected to increase from current levels.

GUR 3 stock status

34. The submitters suggest three year stock assessment reviews of the Gurnard 3 fishery using trawl survey biomass data. The first quantitative stock assessment of GUR 3 was completed in May 2022, and the last partial stock assessment was carried out in 2015.

35. The first stock assessment in 2015 relied heavily on Catch Per Unit of Effort (CPUE) indices taken from flatfish and mixed target fisheries. The 2022 quantitative stock assessment used a CPUE series from the mixed inshore bottom trawl fishery in Pegasus Bay/Canterbury Bight and the trawl survey data from FMA 3, where most of the catch is taken. In a number of gurnard, and other inshore fisheries, CPUE has not been used in assessments because of a lack of consistency over time and the effects of changes in fishing behaviour. The 2022 GUR 3 assessment dropped flatfish target trawl CPUE because of the reduction in available data and the reduced number of vessels.

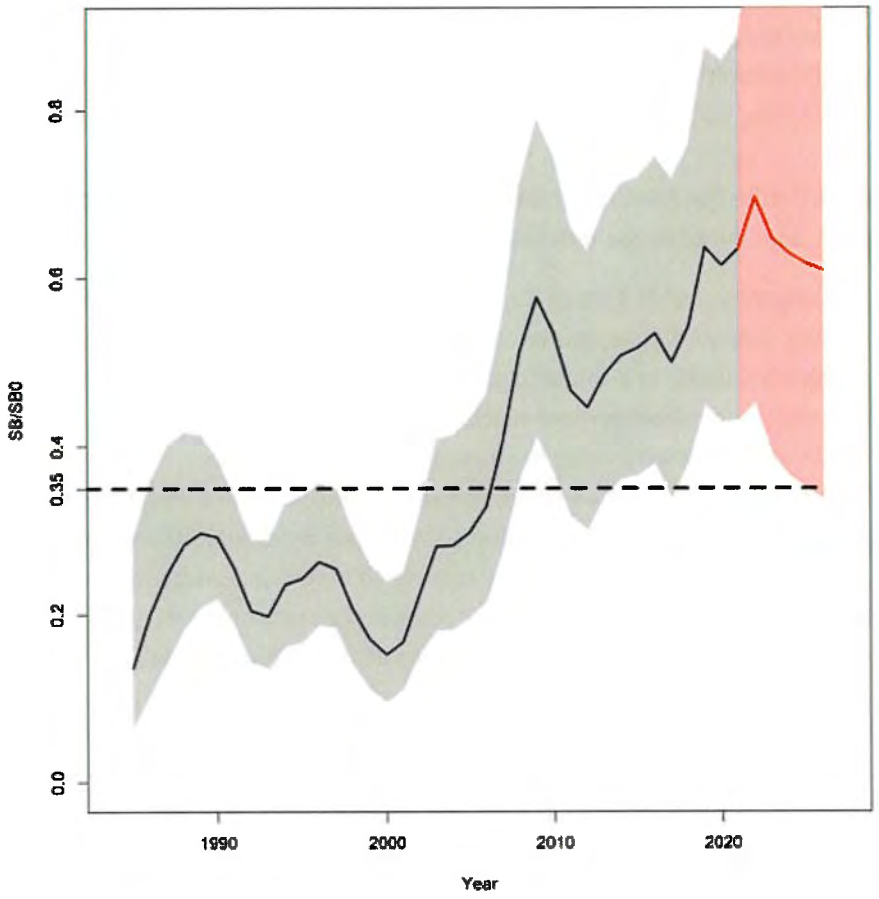

Figure 1. Results of the 2022 GUR 3 stock assessment showing the relative size of the spawning stock biomass compared to the estimate of exploited biomass in 1985. The dotted line is the interim stock target of B35 (35% of the unfished biomass). The red line is the estimated future biomass over the next 5 years (2021–2025) at current catch levels. The shaded area represents the level of uncertainty. (Source: Fisheries New Zealand Plenary, May 2022)

36. According to the above Figure 1, the GUR 3 fish stock is well above the interim target of 35% of unfished biomass (B35). The plenary report notes that fishing mortality (F) in 2020–21 was estimated to be at about FSB40%. So overfishing is about as Likely as Not (40–60%) to be occurring and **spawning stock biomass is projected to decline over the next 5 years at current catch levels.** This is a result of poor recruitment estimated by trawl surveys, hence lower accumulation of biomass in the coming years.

37. The East Coast South Island (ECSI) trawl surveys included a shallower depth range (10 to 30 m) in 2012 primarily to better target gurnard and they contain a long time series of information that has been collected in a consistent way, independent of the gear alterations and changes in fisher behaviour. There is no real or significant increasing trend in any of the ECSI trawl survey gurnard biomass indices since 2012 (Figure 2).

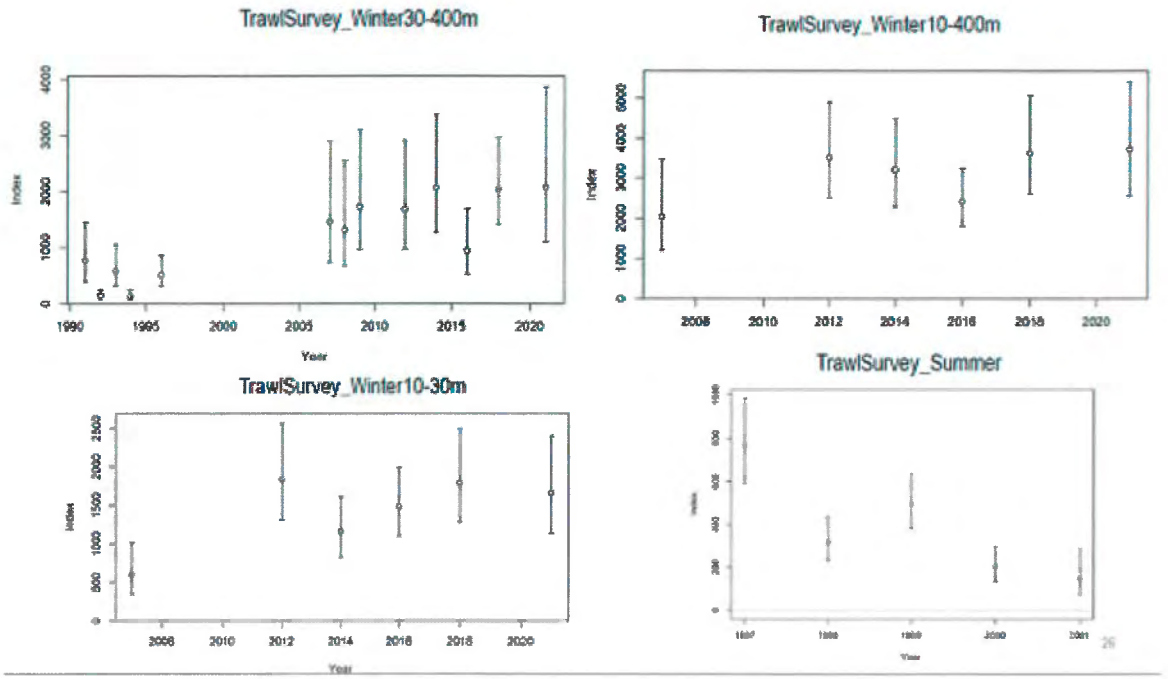

Figure 2. The results from NIWA trawl surveys on the east coast of the South Island, the circle is the point estimate and the lines show the 95% confidence interval. (Source: Fisheries New Zealand Plenary, May 2022)

38. Based on the above information, we submit the Minister must be informed that the circle is the point estimate and the lines show the 95% confidence interval.

Rebuild policy

39. The New Zealand Sport Fishing Council has developed a National Gurnard Policy which is due for ratification at the upcoming AGM in September. The Policy aims to support the rebuilding of gurnard stocks to the target level of 50% of unfished biomass (B50). To achieve this restoration of red gurnard we need to improve yield per recruit by reducing the mortality of small fish, by phasing out the use of trawl gear in inshore waters, and by encouraging an ecosystem-based approach to fisheries management.

Impacts of trawling

40. The submitters are deeply concerned about the effects of trawling on inshore biodiversity and productivity. The prospect of any increase in the number of trawl tows and a larger trawl footprint will have an unknown and unmeasured detrimental effect on the benthic environment. There is poor understanding of the impacts of trawling, such as the effect on benthic habitats and resuspension of fine sediments.

41. Fisheries New Zealand's proposal mentions some of the trawled areas are polychaete worm beds, and these are vulnerable to benthic fishing disturbance. Polychaetes play an important role in marine ecosystem function, helping reduce atmospheric carbon emissions. Habitats

such as these are becoming more important to conserve under climate change pressure. The trawling footprint and trawling effort needs to be reduced, not increased.

42. There is growing international and local pressure to reduce the trawl footprint and trawling effort. The submitters acknowledge there are a limited number of commercial fishers actively trying to reduce their environmental impact from trawling. The transition from indiscriminate bulk harvesting methods, such as towing trawl nets for 4 hours or more will not be easy, but is necessary in a 21st century decarbonised fishing industry under New Zealand's Emissions Reduction Plan (2022).

43. The submitters support the Government's shift towards more holistic management of our oceans based on a set of principles in their Vision, including taking a precautionary approach to achieve the objective of promoting an ecosystem-based approach to research, monitoring and management, and to support the development of a high-value marine economy that provides equitable wellbeing benefits.

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22 July 2022

Submission: Review of Sustainability Measures for Rig (SPO 3) for 2022/23

Recommendations

1. **We recommend the Minister of Oceans and Fisheries** retain the current TAC for the SPO 3 fishery.

2. **We recommend** the Government make meaningful changes towards its stated goal of more holistic management of our oceans based on a set of principles, including taking a precautionary approach to achieve the objective of promoting "an ecosystem-based approach to research, monitoring and management."

The submitters

3. The New Zealand Sport Fishing Council (NZSFC) appreciates the opportunity to submit on the review of sustainability measures for Rig (SPO 3). Fisheries New Zealand (FNZ) advice of consultation was received on 14 June 2022, with submissions due by 22 July 2022.

4. The NZSFC is a recognised national sports organisation of 55 affiliated clubs with over 36,200 members 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.

5. The New Zealand Angling & Casting Association (NZACA) is the representative body for its 35 member clubs throughout the country. 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.

6. The New Zealand Underwater Association is comprised of 43 clubs nationally who represent a cohort of approximately 160,000 participants in underwater activities in New Zealand. These activities include diving, snorkelling, freediving, fin swimming, underwater hockey, spearfishing, underwater photography, underwater rugby, ghost diving marine clean up and Experiencing Marine Reserves. Through our membership we are acutely aware that the depletion of inshore fish stocks has impacted on the marine environment and our members' wellbeing.

7. Collectively we are *'the submitters'*. The submitters 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].

8. Our representatives are available to discuss this submission in more detail if required. We look forward to positive outcomes from these reviews and would like to be kept informed of future developments. Our contact is Helen Pastor,

Background

9. All rig Quota Management Areas (QMAs) use Catch Per Unit of Effort (CPUE) analyses as the primary form of measuring stock status. In current SPO 3 analyses, instead of using estimated catch weight, only landed catch weight is used. This introduces a lot of gaps in knowledge, and a lot of bias.

10. Rig is the most popular shark species harvested by recreational fishers in New Zealand. The 2017/18 National Panel Survey (NPS) estimates recreational harvest of rig in SPO 3 has increased from 8.1 tonnes in 2011-12 to 9.4 tonnes. The tonnage set

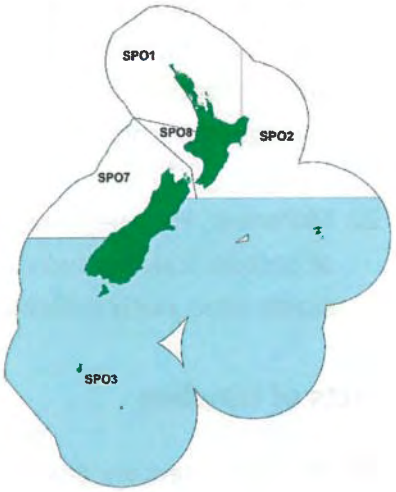
aside to allow for recreational fishing interests was reduced from 60 to 20 tonnes in 2020.

11. The tonnage set aside to allow for Māori customary fishing interests is 20 tonnes. There is only a small amount of customary reporting of rig catch. FNZ suggest this may indicate that tangata whenua use recreational fishing regulations for their harvest.

Proposal

12. Proposal here

13. Fisheries New Zealand advise, "The deemed value rates for SPO 3 are lower compared to similar rig stocks such as SPO 7 and SPO 2. FNZ is proposing to increase deemed value rates to align with other stocks".



14. **Table 1** - Fisheries New Zealand (FNZ) propose the following options for the Total Allowable Catch (TAC), the Total Allowable Commercial Catch (TACC) and associated allowances in the SPO 3 fishery.

Table 1: Proposed management options (in tonnes) for SPO 3 from 1 October 2022.

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	766	660	20	20	66
Option 2	802 ↑ (36 t)	693 ↑ (33 t)	20 –	20 –	69 ↑ (3 t)

15. Any changes to the TAC, TACC or allowances will apply from 1 October 2022.

Discussion

16. A May 2022 assessment of the relative abundance of rig concluded that SPO 3 is at or above the Harvest Strategy Standard target of 40% of unfished biomass (B40). The assessment of part of the stock, in the Foveaux Strait, found that overfishing is likely to be occurring in the Strait.

17. FNZ note the estimates are highly uncertain and based on the available information

they advise, "the status quo is an appropriate option for this fishery". We agree. The Minister must make a precautionary decision to retain the existing settings.

18. We recommend the Minister retains the existing catch settings in SPO 3 as stock projections for SPO 3 are unknown, and overfishing is occurring in some areas such as the Foveaux Strait.

19. SPO 3 commercial catch cannot be increased without also increasing the catch of flatfish, barracouta, red cod, tarakihi, stargazer, elephant fish, and red gurnard also taken by single trawl, or shark catches in set net fisheries. These associated and potentially interdependent species are not in similar states of abundance to each other, especially east coast tarakihi, which has been assessed as below the management soft limit.

20. Moreover, Fisheries New Zealand is only just starting to try and quantify the effects of bottom trawling and we cannot make risky increases when the associated fish stocks have vastly differing stock status.

Impacts of trawling

21. The submitters are deeply concerned about the effects of trawling on inshore biodiversity and productivity. The prospect of increased number of trawl tows and a larger trawl footprint will have an unknown and unmeasured detrimental effect on the benthic environment. There is poor understanding of the impacts of trawling, such as the effect on benthic habitats and resuspension of fine sediments.

22. Historically there have been major issues with discards and dumping in the southern trawl fisheries. The Heron report (2016) revealed that senior fisheries Ministry officials were aware of widespread dumping and failed to act. Fast forward to 2022 we are now facing the prospect of onboard cameras which we envisage will help to change fishing practices.

23. Commercial fishers report an increase in abundance of rig along the east coast of the South Island, making it difficult for fishers to avoid catching rig. There is some suggestion this increase in abundance is due to greater recruitment success since set netting was banned on the east coast to protect vulnerable dolphins. So now a TACC increase is being proposed to account for increased rig catch. This outcome raises several issues:

    a. Commercial catches in SPO 3 were excessive in the 1970s and 80s, regularly over 1000 tonnes, and 2667 tonnes in 1980. This is just reported catch. This level of catch has obviously had an impact on the stock. SPO 3 is now most

likely rebuilding from a very low level, although no useful data prior to 1990 is presented in the Discussion Document.

b. As long as indiscriminate bottom trawling is permitted in mixed species fisheries an increase in abundance of one species will likely impact on fishing success for other, less abundant species.

c. Innovative, new fishing techniques will need to be developed if we expect to continue to manage single species within a mixed trawl fishery. Increasing the TACC for one species at a time just does not make sense nor does it represent ecosystem based fisheries management.

d. Banning indiscriminate bulk harvesting fishing methods seems to have positive impacts for some species. The set net ban on the South Island's east coast has probably enabled rig (and maybe other species) to rebuild to more abundant levels. The trawl ban on the west coast of the North Island has contributed to the rebuild of Snapper 8, now estimated to be at B54, that is 54% of unfished biomass. Consequently, the Minister increased the SNA 8 TAC by 72% and increased the TACC by 23% from 1 October 2021.

e. Schedule 6 of the Fisheries Act (1996) authorises commercial fishers to release rig back to the water if they are likely to survive. Around 10% of annual catch is released under Schedule 6.

24. In a mixed trawl fishery of species with varying characteristics and variable productivity we agree with Fisheries New Zealand that the tonnage set aside to allow for fishing related mortality must be a minimum of 10% of the TACC.

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22 July 2022

Submission: Review of Deemed Value Rates for Selected Stocks for 2022/23

Recommendations

1. **The Minister of Oceans and Fisheries** acknowledges that the deemed value regime is a failure as it has consistently failed to constrain commercial catch of many stocks to the statutory limits set by previous Ministers.

2. The Minister does not lower the deemed value rates applying in KIN 3, 7 & 8, and in SNA 2.

3. The Minister increases the deemed value rates applying in TRE 1, as proposed.

4. The Minister notes that incentives exist for fishers to exceed the Total Allowable Commercial Catch year after year in anticipation of a TACC increase in the future.

5. The Minister retains the current deemed value rates applying in Kingfish 3, 7 & 8 to ensure that strong incentives remain to release live kingfish, and to innovate to avoid large over runs of the TACC.

The submitters

6. The New Zealand Sport Fishing Council (NZSFC) appreciates the opportunity to submit on the review of deemed value rates for five stocks including Kingfish 3, 7 & 8, Snapper 2 and Trevally 1. Fisheries New Zealand (FNZ) advice of consultation was received on 14 June 2022, with submissions due by 22 July 2022.

7. The NZSFC is a recognised national sports organisation of 55 affiliated clubs with over 36,200 members 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.

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9. The New Zealand Underwater Association is comprised of 43 clubs nationally who represent a cohort of approximately 160,000 participants in underwater activities in New Zealand. These activities include diving, snorkelling, freediving, fin swimming, underwater hockey, spearfishing, underwater photography, underwater rugby, ghost diving marine clean up and Experiencing Marine Reserves. Through our membership we are acutely aware that the depletion of inshore fish stocks has impacted on the marine environment and our members' wellbeing.

10. Collectively we are *'the submitters'*. The submitters 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].

11. Our representatives are available to discuss this submission in more detail if required. We look forward to positive outcomes from these reviews and would like to be kept informed of future developments. Our contact is Helen Pastor,

Proposal

12. Proposal here

13. **Table 1 -** Current and proposed deemed value rates for KIN 3, 7, 8, SNA 2, and TRE 1 fish stocks.

		Current				Proposed			
Species	Stock	Interim $/kg	Annual $/kg	Annual at maximum excess $/kg	Differential	Interim $/kg	Annual $/kg	Annual at maximum excess $/kg	Differential
Kingfish	KIN 3	4.00	4.45	8.90	Standard	3.04	3.30	4.00	Special
	KIN 7 / KIN 8	4.00	4.45	8.90	Standard	3.04	3.30	5.00	Special
Snapper	SNA 2	5.40	6.00	12.00	Special	4.03	4.48	8.96	Standard
Trevally	TRE 1	1.13	1.25	5.00	Special	1.35	1.50	5.25	Special

Background

14. 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 over catch not covered by ACE. The per kilo cost may ramp up on a sliding scale, depending on the species and catch area.

15. The submitters have made substantive submissions on the deemed value regime for more than a decade. Our last submission was made in July 2021. Many of the issues raised previously still exist today.

16. We know that not all deemed value invoices are paid by the offender. MPI has offered several reasons for this non-payment in the past. Our concern has always been that the cost of overfishing is not attributed to the fishers responsible, the cost is externalised, paid by the fishery and other stakeholders.

17. The deemed value system continues to incentivise either overfishing or dumping, depending on the landed and export price of the species. It has also driven up Annual Catch Entitlement (ACE) prices for some species. In the case of kingfish, Schedule 6 enables commercial fishers to release fish that are likely to survive.

18. Historically, ongoing excess catch has become a justification for increasing the Total Allowable Commercial Catch (TACC) for several low information stocks which has been supported by the Ministry and approved by earlier Ministers. Commercial catch on its own is a very poor measure of stock abundance and sustainability. The submitters continue to object to excess catch being used as the established pathway to increase TACCs for low information stocks.

19. Deemed values are already low by historical standards and inflation is already over 7%. With fish prices rising the incentive will be to simply keep the fish, pay the deemed value and still make a healthy profit.

Value of catch - Kingfish

20. Kingfish are highly valued by non-commercial interests, both Māori customary and recreational fishing interests, so it is disturbing that FNZ has done so little to protect the kingfish stocks from over exploitation.

21. The submitters acknowledge that there are small-scale commercial fishers who actively avoid kingfish, use Schedule 6 appropriately, and yet there is still potential for some overcatch due to the variable nature of fishing.

22. We have received assurances in the past that Kingfish 7 & 8 are bycatch only fisheries, mainly taken as bycatch by the large trawlers targeting jack mackerel and barracouta off the west coast of the North Island.

23. Bycatch of kingfish isn't inevitable; it can be largely avoided by selecting different fishing grounds. The magnitude of overcatch suggests that some areas with consistently high catches need further protection to defend kingfish.

24. What's even more disturbing is that the factory trawlers and other crews are freezing the kingfish and only earning $2 to $2.50 per kilo. At this pittance rate of return incentives need to remain so as much of the catch is returned to the water alive, as allowed under the provisions of the Fisheries Act. On the other hand, deemed values need to limit targeting of kingfish by inshore vessels with limited ACE who sell fresh chilled catch at a much higher price.

Discussion

Kingfish 3, 7 & 8 (KIN 3, 7 & 8)

25. The deemed value regime is clearly not working.

26. Last year FNZ proposed the Minister of Oceans and Fisheries lower the deemed value rates in KIN 8 to match the lower rates applying in KIN 7. In last year's submission we urged the Minister to retain the existing deemed value rates in KIN 8 as they were clearly not the problem.

27. The Minister agreed to lower the rate from 1 October 2021, and it is no surprise that the problem is KIN 8 remains. It was corporate fishing interests who wanted to reduce the maximum differential rate from $17.80 down to $8.90 so they could continue to catch more of the other west coast species and merely treat kingfish as a low value bycatch. Now they want it reduced again, from $8.90 down to a maximum of $5.00 in KIN 7 & 8 and to $4.00 per kilo in KIN 3.

28. Kingfish is a high value fish coveted by sushi and sashimi consumers worldwide. NZ needs to be seeking to maximise the value from harvesting kingfish. Instead, we continue to be insulted by an industry that treats much of our mighty kingfish as a low value frozen commodity earning around $2.00 to $2.50 per kilo.

29. We strongly object to any recommendations from FNZ or any decision by the Minister to now reduce the deemed value rates in Kingfish 3, 7 & 8.

30. And we cannot continue to fiddle around the margins, the fundamental drivers of dumping, discarding and overcatch must be addressed.

31. The mid-water trawl fleet targeting mackerel are catching kingfish in KIN 8. We have had reports that in some years they get 10-20 tonne bag hits of fish. Kingfish are on Schedule 6 so they can legally be released as long as they might survive. The kingfish caught in large bags and trawled to the surface are susceptible to damage. Without adequate electronic monitoring or observer coverage we have no idea if, or how many, of the kingfish released by commercial fishers under Schedule 6 survive.

32. We remain concerned that despite repeated requests from the submitters and the high value of kingfish to recreational and Māori customary interests, FNZ has not instituted any measures to monitor release mortality of trawl caught fish over time.

33. Clearly, higher deemed value rates have not been a strong incentive to deter overcatch or incentivise a change in fishing practices.

34. We submit that reducing the deemed value rates applying in KIN 3, 7 & 8 will merely reduce QMS compliance costs making fishing more profitable for the offending corporates, at the expense of the resource and to the detriment of recreational, Māori customary and environmental interests.

Trevally 1 (TRE 1)

35. FNZ also proposes the Minister increase the deemed value rates applying in Trevally 1 (TRE 1).

36. We agree with the proposed deemed value rate increase as the port price and export value have both increased, and it is frequently a target species for purse seine and mixed species trawl vessels in TRE 1.

37. We agree that the management of TRE 1 ought to be reviewed when the updated research data is available as the stock has not been reviewed since it was introduced to the Quota Management System in 1986.

Snapper 2 (SNA 2)

38. FNZ also proposes the Minister reduce the deemed value rate applying in SNA 2, from an annual rate of $6.00 per kilo to $4.48.

39. FNZ justify this proposal on the basis that it will align the SNA 2 rates with those applying in SNA 8.

40. Last year the Minister agreed to both increase the Total Allowable Catch (TAC) in SNA 8 and decrease the deemed value rate, based on an increase in stock abundance. FNZ advises the same rationale ought to apply in SNA 2, as there is some indication the stock is rebuilding.

41. FNZ has not provided any evidence in the Discussion Document to support the assertion the SNA 2 stock is rebuilding. A deemed value reduction should not be used as a fisheries management tool to get around consulting on and resetting catch limits. And if SNA 2 is rebuilding then the Minister could review catch settings next year. That is the appropriate time to review SNA 2 deemed value rates, not just because it seems like a good idea to align the rates with SNA 8. Otherwise, we are just creating a downward trend where the next proposal will be to reduce the deemed value rates in SNA 1 because there is crossover with the neighbouring SNA 2 stock.

42. Over the past few years, we have seen similar reductions in kingfish. First it was a reduction to the deemed value rates in KIN 3 & 7, now it's proposed for KIN 8.

43. This nonsense must stop.

Summary

44. Based on the available information the Minister must acknowledge that the deemed value regime has failed at the most fundamental level, to constrain commercial catch

to statutory levels. We urge the Minister to direct Fisheries New Zealand to remove the incentives for fishers to exceed the Total Allowable Commercial Catch year after year in anticipation of a TACC increase in the future.

45. FNZ needs to front up and admit that excess catch goes largely unpunished. Despite repeated requests, we have never been given adequate information in regard to the sum of deemed value invoices issued compared to deemed value payments in response to those invoices.

46. The inadequate and unreasonable response to ongoing overcatch and lack of any meaningful measures to address the core issues leaves us seriously concerned that the proposed reductions are a strategic move by FNZ and corporate fishing interests to lock in lower deemed value rates prior to the onboard camera rollout.

47. Cameras onboard combined with land-all catch will make some operations unprofitable, while also making it affordable for corporate fishers to land fish because they are also wholesalers and retailers, and the deemed value rate would be low.

48. We are concerned that small-scale owner-operators will be left with no choice but to sell out at a lower price to the corporates as they won't be able to continue in business, yet these owner-operators are the very people we need to retain in the industry. They live and fish locally while supporting their local communities and regional economy. Corporates on the other hand send a truck to pick up fish from the docked vessel, drop ice on board and drive away to the processing shed in a city miles from the wharf, thus denying locals the opportunity to fulfil their social, economic, cultural, and personal wellbeing from fishing.

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21 July 2022

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Sustainability Review 2022
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Review of sustainability measures for October 2022

The Environment and Conservation Organisations of NZ (ECO) is the national alliance of 45 groups with a concern for the environment. We welcome this opportunity to make a submission on the ECO has been involved in issues of marine and fisheries policy since its formation 49 years ago. This submission has been prepared by members of the ECO Executive and the marine and fisheries working group. It is in line with ECO Policy that was developed in consultation with ECO member bodies and endorsed by our AGM.

1. Introduction

ECO has supported measures to protect threatened species and to sustainably manage fisheries for the present and the future generations.

ECOs key reasons for making these recommendations include:

- The need to take a precautionary approach to fisheries management and setting catch limits;
- The low numbers of observers or cameras on inshore vessels undermines the management and monitoring regime for inshore species.
- The Ministry has yet to implement key provisions of the Fisheries Act:
    - Benthic impacts of bottom trawl fishing when there is no strategy to avoid, remedy or mitigate the impacts of bottom fishing;
    - Habitat of particular significance for fisheries management have not been identified.
    - Maintenance of biological diversity has not been given the effect to.

These points are developed further in this submission.

2. Recommendation on proposals

Hoki (HOK1): ECO supports the reduction of catch limits, allowances and deemed values for hoki in the 1 October 2022 fishing year to rebuild the hoki stock. ECO supports Option 2 and the cut in the Western stock.

Scampi (SCI1): (East Coast of Auckland and Northland, Bay of Plenty): ECO does not support and increase in the scampi stock given the impact of bottom trawling and the bycatch level in the targeted scampi fishery. ECO supports the status quo.

Gemfish (SKI3 and 7): ECO does not support a further increase of SKI3 and 7 at this stage. This is a cautious approach and results in the lowest risk to the stock, and wider ecosystem. ECO supports the status quo option.

Rough and Smooth Skates (RSK8 and SSK8) West Coast North Island: ECO does not support and increase in the skate TACCs. This is a cautious approach and results in the lowest risk to the stock, and wider ecosystem. ECO supports the status quo option.

Blue Warehou (WAR 2 & WAR 8) Taranaki, Wellington, East Cape, Hawke's Bay: ECO supports option 3 catch reductions. This is a cautious approach and results in the lowest risk to the stock, and wider ecosystem. ECO notes option 3 would reduce the catch to a level that is still greater than recent catches.

West Coast South Island (Multispecies) Snapper SNA7: Red Gurnard (GUR7) Rig (SPO7): West Coast and Top of South Island: ECO supports Option 1 for each of the stocks considered. This is a cautious approach and results in the lowest risk to the stock, and wider ecosystem. ECO supports the status quo option.

Blue Cod (BCO7) West Coast and Top of South Island: ECO supports option 2 catch reduction. This is a cautious approach and results in the lowest risk to the stock, and wider ecosystem.

Red Gurnard (GUR 3): East Coast South Island, Chatham Rise, Southland, Sub-Antarctic, Rakiura and Fiordland: ECO supports a cautious approach and results in the lowest risk to the stock, and wider ecosystem. ECO supports the status quo option.

Rig (SPO3): East Coast South Island, Chatham Rise, Southland, Sub-Antarctic, Rakiura and Fiordland: ECO does not support and increase in the rig TACC. This is a cautious approach and results in the lowest risk to the stock, and wider ecosystem. ECO supports the status quo option.

Bladder kelp attached (KBB3G and 4G): (East Coast South Island and Chatham Islands): ECO supports the reductions of 75% as the minimum without further information given the ecological importance of kelp beds. Actually, a reduction of closer to 90% would have little impact on catches.

3. General Issues:

The proposals do not consider all the obligations on a decision-maker under sections 5, 8 to 10, and 11 to 14 of the Fisheries Act 1996.

The Ministry needs to consider how environmental considerations are better integrated with pure single stock assessment considerations. Every year the inclusion of bycatch, adverse effects of fishing, maintenance of biodiversity, etc, tend to be after-thought considerations rather than central issues to setting catch limits. The Strategy for Management the Environmental Effect of Fishing seems to have been forgotten about by MPI.

The Ministry needs to consider the obligations on future generations and the need to avoid, remedy or mitigate the effects of fishing on the marine environment.

International agreements and measures have further articulated the precautionary approach. Section 5 of the Fisheries Act requires decision makers to act in a manner consistent with "New Zealand's international obligations relating to fishing".

4. Harvest Strategy

ECO notes that the harvest strategy standard (HSS) is nearly 10 years past its review date. The Standard does not consider broader ecosystem and environmental factors. It does not consider the environmental principles. If those aspect of the Fisheries Act 1996 were considered it would result in higher stock targets than the 40% suggested in the discussion document. In most cases the proposals use the default provisions in the harvest strategy.

The current harvest strategy and Fisheries NZ approach is overly focused on the 20% "soft limit" rather than higher targets which include ecosystem considerations. In general ECO does not support stock targets below 50% of the unfished stock size.

ECO considers it is well overdue for the Harvest Strategy Standard (2008) to be reviewed and made more ecosystem focused. The Standard states it *"should be subject to review in a period not exceeding five years"* so this should have occurred in 2013 at the latest. So the standard is now nearly 10 years past it 5 year review.

The strategy still refers to old default soft and hard limits that are neither precautionary nor meet international best practice. For example, the hard limits are half the level used in Australia which is 20% a level at which targeted fishing for a species must stop.[1]

The biomass targets are well below the practice used in CCAMLR for predator species (50%Bo) and higher levels for prey species (75%Bo). The NZ Harvest Strategy itself notes that *"it is*

[1] See Australian Harvest Strategy 2021.

becoming increasingly difficult to justify stock targets less than 30-40% Bo (or, equivalently, removing more than 60-70% of the unfished biomass)."[2]

For example, ECO notes that the Worm et al (2009)[3] paper recommends that stocks be maintained above Bmsy: *"In fisheries science, there is a growing consensus that the exploitation rate that achieves maximum sustainable yield (u) should be reinterpreted as an upper limit rather than a management target. This requires overall reductions in exploitation rates, which can be achieved through a range of management tools."*

Penney et al (2013)[4] in their review for the Australian harvest strategy suggested a range of best practice approaches would involve higher stock levels:

- Target for important forage fish at 75%Bo "to ensure stocks remain large enough to fulfil their ecotrophic functions";
- The proxy for B_{MSY} for shark species may need to be closer to 50%Bo than the current proxy of 40%Bo;
- B_{MEY} proxy is more likely to lie in the range of 50-60%Bo.

In a review of biological reference points for a number of shark species, Bracinni et al (2015) showed that the biomass target for shark species can exceed 40%Bo and ranged from 46% to 65%Bo depending on the shark species.

Larger stock sizes are also recommended in a recent review by Pauly and Froest (2020)[5] noted that: *"In principle, most fisheries scientists and relevant legislations and regulations agree that MSY should be a limit, and not a target, for fisheries management, notably because if it were a target, and successfully implemented, then there would be a 50% probability that the biomass of the managed stock would be below the level that can produce MSY. This generally implies that target biomass should be set above the MSY level, as is done explicitly in recently formulated fisheries regulations (e.g. CFP, 2013[6])."*

A key question for all the stocks is how to treat vulnerable biomass and what the target should be and taking a precautionary and ecosystem approach supports larger stock sizes.

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[2] Footnote 6 – Ministry of Fisheries (2008) Harvest Strategy Standard for NZ Fisheries. October 2008. 25p.

[3] Worm B, Hilborn R, Baum JK, Branch TA, Collie JS, et al. (2009) Rebuilding global fisheries. Science 325: 578–585

[4] Penney, AJ, Ward, P & Vieira, S 2013, Technical reviews for the Commonwealth Fisheries Harvest Strategy Policy 2007: technical overview, ABARES, Report to client prepared for the Fisheries Research and Development Corporation), Canberra, May.

[5] Pauly, D. and Froese, R. (2020) MSY needs no epitaph—but it was abused. – ICES Journal of Marine Science, doi:10.1093/icesjms/fsaa224

[6] CFP. 2013. Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy. Official Journal of the European Union, 354: 22–61.

Larger stock sizes have been recommended for resilience to climate change, increased "blue" carbon sequestration, and reducing the carbon footprint of the fishing industry.

5. Rebuilding Period

On any rebuilding period for a stock ECO support clear consideration of the biological, ecological and environmental perspectives, to allow the shortest timeframe.

New Zealand has signed up to the Sustainable Development Goals (SDG) and SDG 14 is to "Conserve and sustainably use the oceans, seas and marine resources".

Sub-goal 14.4 is:
By 2020, effectively regulate harvesting, and end overfishing, illegal, unreported and unregulated (IUU) fishing and destructive fishing practices and implement science-based management plans, to restore fish stocks in the shortest time feasible at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.

ECO support measures "*to restore fish stocks in the shortest time feasible at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.*"

6. Shelving of quota:

ECO does not support shelving quota.

In principle, we do not support the shelving of quota, which is sometimes suggested by fishing industry interests. Shelving goes against the fundamental direction of the quota management system and the setting of catch limits.

This questionable arrangement leaves fisher balance sheets unchanged even though there are in fact no fish to match the "shelved" portion of TACC. This means in effect "ghost" ITQ on the company's balance sheets. Such an arrangement has uncanny similarities with the dead serfs accumulated by the would-be landowner, Chichikov, at the centre of Gogol's 1842 novel Dead Souls (Gogol, 1842).

In 2000 there was a decision by the then Minister of Fisheries' to undertake a review of the shelving of quota. Could you please advise when the review of shelving of quota is to take place?

7. Other sources of Mortality

ECO looks forward to a review of other mortality in inshore fisheries. The 10% default figure needs to consider seen and unseen mortality especially given the impact of bottom trawling.

8. Cameras and observers

ECO notes the low level of observer coverage is low in inshore fisheries. A noted in an earlier submission: "observer coverage for all of the East Coast tarakihi stocks has been below 10% (between 0.1% and 7.2%) over the last 5 fishing years. FNZ deems this not sufficient to provide any further consideration of the other mortality allowance for East Coast tarakihi at this time."

In all fisheries it is essential to achieve and retain high levels of observer coverage. Coverage should be designed to be representative of the fishery (across seasons and areas), enable statistically robust estimates of by-catch with a 20%CV on the estimates, and at least 20% of effort monitored.

Observer information is crucial for stock assessments and the analysis of bycatch and discards, including bycatch of threatened or protected species. Observers provide information to MPI, research providers, and to DOC and is reported in some circumstances to working groups and plenaries. DOC produces an annual summary of information provided by observers: MPI should do the same.

ECO supports video monitoring for all vessels especially those without observers. ECO welcomes action to install cameras in the inshore fishery[7] but that coverage is not intended to be completed until June 2024.

ECO urges action to include cameras on all commercial fishing vessels. ECO looks forward to a wider commitment to install cameras on all vessels so that there is a robust system of verification in the current reporting regime.

9. Environmental Principles

The environmental principles of the Fisheries Act 1996, which must be taken into account when considering sustainability measures for each stock being considered theses are:

> *(a) Associated or dependent species should be maintained above a level that ensures their long-term viability (in particular marine mammals, seabirds, fish and invertebrate bycatch).*
> *(b) Biological diversity of the aquatic environment should be maintained (in particular the benthic impacts from fishing); and*
> *(c) Habitats of particular significance for fisheries management should be protected.*

This is broader that habitats of significance. This includes consideration of the maintenance of biological diversity.

In regard to habitats of particular significance, ECO welcomes the more in-depth discussion in the consultation documents. It still needs to be developed further.

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[7] On-board cameras for commercial fishing vessels. Ministry for Primary Industries

For example, Bladder kelp beds themselves would meet the criteria of habitats of significance for fisheries management given they are habitat forming, they support many other marine species as food or shelter, and they are foundation species and ecosystem engineers.

10.Bottom trawling

ECO notes there has been no consideration of the impact of bottom trawling on the benthic environment in the inshore.

ECO looks forward to measures to maintain marine biodiversity and avoid, remedy or mitigate the adverse impacts of commercial scale bottom impacting methods including trawling and dredging on benthic species.

For example, the impact of scampi trawling on the benthic species needs wider discussion given that the total catch is over five times the target scampi catch and much of the catch is discarded.

ECO does not accept BPAs are conserving biodiversity, protecting habitats of significance for fisheries management, or protecting vulnerable marine areas. BPAs are:

- Unrepresentative of marine biodiversity impacted by fisheries;
- Mainly areas deeper than depths trawled ie greater than 1500m depth - substantial parts of them (72.2%) are located in waters that are too deep to trawl with current technologies (> circa 2000 m);
- Poor protection of endemic species (Leathwick et al 2008);
- Not representative of features like hills, seamounts and similar features.
- Poor protection of vulnerable marine species and continued bycatch of protected corals and other vulnerable marine species.

For the areas with no protection from bottom fishing the destruction of benthic species is ongoing.

The CSP Annual Report has reported every year since 2010 on protected corals caught in middle depth fisheries.

For example, according to the CSP review of bycatch in the middle depth trawl fisheries in 2017-18:
A total of 67.2kg of coral bycatch was observed this year, a small (2%) increase in coral catch in comparison the previous observer year (2016/17) (Hjorvarsdottir & Isaacs 2018). More than half (57%) of the coral bycatch occurred in the SUB FMA and overall, bushy hard coral (Goniocorella dumosa) was the most common coral bycatch in this fishery.

The level of captured corals may only represent 1 to 10 percent of the species destroyed by the net (see Freese et al 1999 and Auster et al 2011) given the low catchability of corals and other vulnerable benthic species.

As Clark et al (2015) observed: *"many deep-sea invertebrates are exceptionally long-lived and grow extremely slowly: these biological attributes mean that the recovery capacity of the benthos is highly limited and prolonged, predicted to take decades to centuries after fishing has ceased."* Protected deep sea corals are amongst those long-lived invertebrates. (Tracey et al 2003[i]).

A review by NIWA scientists have found little evidence of benthic community resilience to bottom trawling after 15 years, and that the nature of recovery in biotic communities after disturbance is uncertain (Clark *et al.* 2019[ii]).

11.Habitats of Particular Significance to Fisheries Management

There is still no comprehensive identification of *"habitat of particular significance for fisheries management [that] should be protected"* (section 9 (c)) by MPI. This is a major flaw in implementing the requirements of the 1996 Fisheries Act, over 20 years after it came into force.

ECO welcomes MPI starting to consider the issue but it must be central to the decisions made under the Fisheries Act.

ECO welcomes a growing recognition of the need to identify these habitats. The current consultation document re-interprets the legislation and ignore the reference to "fisheries management" which is broader than a single stock and quota species consideration.

MPI has reinterpreted the provision to only apply to "supporting the productivity of fisheries resources". This is a narrow re-interpretation of the Act's provisions. It would, for example, exclude habitat areas with high seabird by-catch or benthic (seabed) diversity. MPI needs to consider these habitats in this context of broader than just a target species (eg spawning, connectivity with spawning areas, juvenile nursery areas, biogenic habitat etc) and considering the wider ecosystem which is relevant to fisheries management.

Bladder kelp beds themselves would meet the criteria of habitats of significance for fisheries management given they are habitat forming, they support many other marine species as food or shelter, and they are foundation species and ecosystem engineers.

Any considerations should include the impact on bottom trawling or dredging on benthic areas.

Voluntary closure are not an adequate consideration as they are voluntary and if not adhered to there is no method of enforcement to protect these areas. ECO notes the number of vessels prosecuted in recent year for fishing in closed areas, including marine reserves.

12.Marine mammals and Seabirds

ECO notes that there needs to be broader consideration of the impacts of trawling on Maui and Hector's dolphin. We note that there are dolphins regularly seen on the East Coast of the North island which are not considered in the current threat management plan.

Further the Management of seabird interactions with New Zealand's commercial fisheries is guided by the National Plan of Action– Seabirds 2020 (NPOA-Seabirds).

ECO supports moves to better implement the current National Plan of Action on Seabirds and measures to reduce and eliminate seabird bycatch in New Zealand fisheries and by New Zealand and other vessels on the high seas. ECO looks forward to consultation on the revised NPOA in the coming year.

Measures taken in the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) waters to eliminate seabird bycatch and keep the focus on measures and implementation are an important benchmark for other fisheries.

The Vision of the NPOA on Seabirds is "New Zealanders work towards zero fishing-related seabird mortalities."

Te Mana o te Taiao has a 2025 goal of "the number of fishing related deaths of protected marine species is decreasing towards zero for all species".

There is a legal obligation under the Fisheries Act 1996 of "avoiding remedying or mitigating any adverse effects of fishing on the aquatic environment" (section 8(2) and section 15(2)). In section 15 this requirement focuses on protected species (eg seabirds and fur seals).

Several albatross species and petrel species observed caught in fisheries are recognised as globally threatened species in the *IUCN Red List of Threatened Species* (Redlist.org).

13.Other legislation

The boundaries of the Hauraki Gulf Marine Park also intersect with SCI1 and HOK1, however, there is some commercial fishing for scampi in the deeper waters within the park area. Managing the stocks need to be consistent with the Hauraki Gulf legislation but the impact of bottom trawling is being considered further.

The discussion documents have little information of the provisions in regional coastal plans that are relevant to this fishery. Further review is needed of the provisions in coastal plans for inshore stocks.

14.International Obligations

Decision makers need to consider relevant international obligations. Section 5 of the Fisheries Act requires decision makers to act in a manner consistent with "*New Zealand's international obligations relating to fishing*".

Relevant International obligations clearly include those in the Law of the Sea (UNCLOS) as well

as the Convention on Biodiversity, and UN General Assembly Commitments.

International agreements and measures have further articulated the precautionary approach. Amongst these obligations is the United Nations Food and Agriculture Organisation (FAO) Code of Conduct on Responsible Fisheries (1995) which states that:

> *"6.5 States and sub-regional and regional fisheries management organizations should apply a precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment, taking account of the best scientific evidence available. The absence of adequate scientific information should not be used as a reason for postponing or failing to take measures to conserve target species, associated or dependent species and non-target species and their environment."*

Article 7.5 of the Code of Conduct further set out what constitutes precautionary management in fisheries.

> **7.5 Precautionary approach**
> 7.5.1 States should apply the precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment. The absence of adequate scientific information should not be used as a reason for postponing or failing to take conservation and management measures.

The United Nations Implementing Agreement on High Seas Fisheries and Straddling Stocks includes a standard on *"coastal States and States fishing on the high seas [to] apply the precautionary approach in accordance with article 6."* Article 6 includes requirements for:

> *"1. States shall apply the precautionary approach widely to conservation, management and exploitation of straddling fishstocks and highly migratory fishstocks in order to protect the living marine resources and preserve the marine environment.*
> *2. States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures."*

While these are not straddling stocks, article 6 set out international best practice for applying the precautionary approach to fishing.

The general approach is where information is uncertain or unknown about the state of a stock or biological information, the decision should favour lower catch limits or more environmentally stringent regulations.

States have a general and unqualified duty to protect and preserve the marine environment and rare or fragile ecosystems and habitats (Law of the Sea Articles 192 and 194(5), Article 14 of the Noumea Convention).

> *Article 192: General Obligation: States have the obligation to protect and preserve the marine environment.*

And
194(5) The measures taken in accordance with this Part shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.

These are relevant considerations.

15.Effects of Climate change and ocean acidification

The effects of climate change on fisheries and the emissions of greenhouse gases from the fishing industry needs to be included in the considerations of the Ministry.

A recent FAO review concluded that: *"Though precise consequences cannot yet be forecast, climate change is likely to affect fisheries and aquaculture, their dependent communities and related economic activities along three main pathways:*

1. *indirect wider socio-economic effects (e.g. fresh water use conflicts affect all food production systems, adaptation and mitigation strategies in other sectors impact aquatic systems in general or fisheries and aquaculture directly);*
2. *biological and ecological responses to physical changes (e.g. productivity, species abundance, ecosystem stability, stock locations, pathogen levels and impacts); and*
3. *direct physical effects (e.g. sea level change, flooding, storm impacts)."*

When setting catches or implementing other measures the Minister should consider the effect of climate change and ocean acidification on long-term sustainability.

The effect of ocean acidification is also relevant. Cummings et al (2020) review the impact of ocean acidification on many species.[8] This covers both the information and uncertainties.

For Snapper Parsons et al (2021)[9] noted a wide range of potential outcomes: "Overall, the most pessimistic scenario predicted about a 29% reduction in yield, and the most optimistic about a 44% increase. As such, changes to larval survival, are predicted to translate into a similar magnitude effect on fishery yield, although the direction of this change is uncertain." The review also "highlights the wide variety of effects that fish could potentially experience as a result of OA. Although fish have generally been regarded as less vulnerable than shelled invertebrates, this review demonstrates that they can be affected in multiple ways, with potentially serious consequences."

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[8] Cummings, V.J.; Lundquist, C.J.; Dunn, M.R; Francis, M.; Horn, P.; Law, C.; Pinkerton, M.H.; Sutton, P.; Tracey, D.; Hansen, L.; Mielbrecht, E. (2021). Assessment of potential effects of climate-related changes in coastal and offshore waters on New Zealand's seafood sector. *New Zealand Aquatic Environment and Biodiversity Report No. 261.* 153 p.

[9] Parsons, D.M.; Allan, B.J.M.; Bian, R.; Herbert, N.A.; Gublin, Y.; McKenzie, J.R.; McMahon, S.J.; McQueen, D.E.; Pan, H.; Pether, S.; Radford, C.; Setiawan, A.N.; Munday, P.L. (2021). Ocean acidification and elevated temperature effects on snapper. *New Zealand Aquatic Environment and Biodiversity Report No. 275.* 58 p

Mason et al 2022[10] reviewed many of the important attributes for resilience in fisheries and marine ecosystems in response to climate change.

Larger stock sizes have been recommended for resilience to climate change, increased "blue" carbon sequestration[11], and reducing the carbon footprint of the fishing industry. Catch rates will be higher and effort lower with high stock sizes and reduce the carbon emissions in catching fish[12].

There is a growing need for managers to incorporate maximum carbon sequestration into their decision-making[13],

Overall, the uncertainties of the impacts of climate change including warmer water temperatures, and ocean acidification highlights the need to apply a precautionary approach to catch limits and fisheries management.

16.Economic and associated Considerations

ECO is concerned that the discussion on economic considerations only look at the impact on fishers and not on the wider ecosystem or other users. A better approach is to consider the total economic value of a fish stock, including customary and recreational values.

Economists use the "Total Economic Value" concept to capture both market and non-market values (see for example Pearce and Turner 1990[14]). The value of fish and seafood that is sold on the market is only one small part of the value that people attach to fish. Non-market economic values include:

- the values of ecosystem functions and non-extractive uses and values (e.g. for observation or scientific inquiry) of fish;
- the values of retaining the marine environment and fish stocks and ecosystems intact for their own sake (existence value)
- the value put on handing the resource and environment to the future in good shape (bequest value) and
- the value of retaining options for all uses in the future (option value).

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[10] Mason, J. G., Eurich, J. G., Lau, J. D., Battista, W., Free, C. M., Mills, K. E., Tokunaga, K., Zhao, L. Z., Dickey-Collas, M., Valle, M., Pecl, G. T., Cinner, J. E., McClanahan, T. R., Allison, E. H., Friedman, W. R., Silva, C., Yáñez, E., Barbieri, M. Á., & Kleisner, K. M. (2022). Attributes of climate resilience in fisheries: From theory to practice. *Fish and Fisheries*, 23, 522–544. https://doi.org/10.1111/faf.12630

[11] Mariani, G., Cheung, W. W. L., Lyet, A., Sala, E., Mayorga, J., Velez, L., et al. (2020). Let More Big Fish Sink: Fisheries Prevent Blue Carbon Sequestration— Half in Unprofitable Areas. Sci. Adv. 6 (44), 1–8. doi: 10.1126/sciadv.abb4848

[12] Ferrer EM, Giron-Nava A and Aburto-Oropeza O (2022) Overfishing Increases the Carbon Footprint of Seafood Production From Small-Scale Fisheries. Front. Mar. Sci. 9:768784. doi: 10.3389/fmars.2022.768784

[13] Krabbe N, Langlet D, Belgrano A and Villasante S (2022) Reforming International Fisheries Law Can Increase Blue Carbon Sequestration. Front. Mar. Sci. 9:800972. doi: 10.3389/fmars.2022.800972

[14] Pearce, D.W. & R.K. Turner 1990. The Economics of Natural Resources and the Environment, Harvester.

"Total Economic Value" does not include, but may reflect aspects of cultural values. In public policy, ethical concerns, such as the sense of the obligation to not cause extinctions and to retain ecosystems intact may set limits to extraction or after other uses or abuses of the environment. Efficiency then becomes an optimisation problem – often subject to constraints such as not causing ethically unacceptable harms.

This approach includes a consideration of the impacts on recreational and customary fishing values.

Full internalization of costs. Principles of economic efficiency (and equity) also require that full costs are faced by those who cause environmental harm, and that there is full internalisation of management and scarcity (i.e. resource rental) costs.

Overfishing and reducing a stock below a long-term goal or management target should face the costs of that environmental harm.

One approach would be to consider how much biomass has been lost and value it based on market and non-market values. This would give MPI an estimate of economic loss to the stock of overfishing. This could be partly estimated by port price x biomass lost below the target level.

If MPI approached the consideration of economic losses and benefits this would include an assessment of overfishing which should be included into the overall assessment of economic impacts of any decision.

The recent IPBES report (2022)[15] on values includes a commentary on the need to include non-market values in considerations.

17. Commentary on each of the Proposals

Commentary on stocks proposed for reviews of catch limits, allowances and deemed values as part of the 1 October 2022 sustainability round.

Species	Stock	MPI Change	MPI Proposal	Comments
Hoki	**HOK 1 - All of New Zealand (excludes Kermadec)**	↓	The 2022 HOK 1 stock assessment estimated the western stock to be below the management target	ECO supports a reduction in the catch limit for hoki. There is ongoing uncertainty and concern over the sustainability of hoki

[15] IPBES (2022) Summary for policymakers of the methodological assessment regarding the diverse conceptualization of multiple values of nature and its benefits, including biodiversity and ecosystem functions and services (assessment of the diverse values and valuation of nature). 37p.

Species	Stock	MPI Change	MPI Proposal	Comments
			range (35-50% B_0). Fisheries New Zealand is proposing an option to decrease the Total Allowable Catch (TAC), Total Allowable Commercial Catch (TACC) and western stock catch limit of HOK 1 to move the western stock back within the target management range in a shorter timeframe.	catch limits. ECO consider MPI needs to take a precautionary approach in managing fish stocks both for the fishery and the ecosystem. ECO notes that current assessment indicates that the biomass of the western stock was estimated to be below the MPI management target range at 28% B0. Further while the eastern stock biomass, using estimates of recent recruitment and the current catch limits, is predicted to increase over the five-year projection, it does not reach the lower bound of the MPI management target (35%Bo). ECO notes that the Eastern stock appears to be in a better shape at just over 50%Bo. A 5000 tonnes cut in the limit is projected to allow the Western stock to exceed 35%Bo in 5 years. Hoki are an important part of the middle depth ecosystem. ECO notes that: Hoki is the species with the highest biomass in the bottom fish community of the upper slope (200– 800 m), particularly around the South Island (Francis et al 2002) and is considered to be a key biological component of the upper slope ecosystem. Understanding the predator-prey relationships between hoki and other species in the slope community is important, particularly because substantial changes in the biomass of hoki have taken place

Species	Stock	MPI Change	MPI Proposal	Comments
				since the fishery began (Horn & Dunn 2010). ECO looks forward to a broader consideration of the importance of hoki in the marine ecosystem. ECO welcomes the greater recognition of the habitats of significance for fisheries management in the discussion paper. While the considerations are not sufficient they are a step forward. ECO does not accept the current arrangement are sufficient to manage the benthic impacts of bottom trawling. We look forward to the outcome of the EEZ forum. The reduction in the TACC for hoki may help to reduce or resolve a range of bycatch issues in this fishery.
Scampi	**SCI 1 - East Coast of Auckland and Northland, Bay of Plenty**	↑	An updated Catch Per Unit Effort (CPUE) analysis indicates that scampi abundance in SCI 1 has increased since 2019, and in its last accepted assessment, the stock was estimated as very likely to be above management target. FNZ is proposing options to increase the TAC and TACC for SCI 1 to provide for greater utilisation.	ECO does not support an increase in the catch limit for Scampi 1. ECO notes the DWWG did not accept the fully quantitative assessment for SCI. ECO notes that the quantity of non-target bycatch is likely to increase proportionately under either of the proposed options to increase the TAC. Monitoring this is not an acceptable response to a known problem. Scampi fisheries have a bycatch and impact problem given that they are

Species	Stock	MPI Change	MPI Proposal	Comments
				bottom trawl using a much finer mesh than other trawl fisheries. The bycatch of fish species is over five times the level of the target scampi catch. "In the 2002–03 to 2015–16 fishing years, total annual bycatch was estimated to range from 2400–5600 t compared with total landed scampi catches of 550–893 t, and scampi accounted for 19% of the total estimated catch by weight from all observed tows (Anderson & Edwards 2018). Nearly 500 bycatch species or species groups were identified by observers, and the main bycatch species were javelinfish (18%), rattails (12%), and sea perch (10%), which were mostly discarded (Figure 2). Smaller catches of hoki (5%), ling (4%), and dark ghost shark (3%) were also recorded. Invertebrate species made up a much smaller fraction of the bycatch overall (about 7%), with crustaceans (3%), echinoderms (2%), and squid (0.9%) being the main invertebrate bycatch species groups." The level of discarding is very high in this fishery: "Total annual discard estimates from 2002–03 to 2015–16 showed no trend over time, ranging from a low of 940 t in 2003–04 to 4070 t in the following year (Anderson & Edwards 2018). Non-QMS species were the main group discarded, often at a magnitude of two to three times that of QMS species discards. Annual estimated discards of scampi were generally low but exceeded 10 t in two years (2002–03 and 2009–10). The species discarded

Species	Stock	MPI Change	MPI Proposal	Comments
				in the greatest amounts were those caught in the greatest amounts, javelinfish (95%), rattails (91%), and sea perch (68%). From 2002–03 to 2015–16, the overall discard fraction value was 3.6 kg, with little trend over time. Discards ranged from 1.2 to 4.9 kg of discarded fish for every 1 kilogram of scampi caught." These comparisons does not include cryptic mortality of fish and other species not hauled on the deck. ECO looks forward to measures to maintain marine biodiversity and to avoid, remedy or mitigate the impacts of the scampi fishery on benthic species. ECO welcomes the higher level of observer coverage in the scampi fishery (33.21% in 2020-21). ECO looks forward to discussion on the scampi fishery impacts as part of the discussion on trawl impacts.
Gemfish	**SKI 3 & 7 - Entire South Island, Chatham Rise, West Coast off Taranaki and Wellington**	↑	CPUE analyses have suggested an increase in biomass of SKI 3 and SKI 7 in recent years. The TACs and TACCs of both stocks were increased in 2019 and in 2021. Since those increases were implemented, landings have continued to increase, and the best available information indicates	ECO does not support a further increase of SKI3 and 7 at this stage. This is a cautious approach and results in the lowest risk to the stock, and wider ecosystem. ECO supports the status quo option. ECO notes the catch limits for this stock were substantially increased over the last 3 years ago. Also notes: "gemfish catches off the west coast of the South Island (SKI 7) are primarily a bycatch of the winter

Species	Stock	MPI Change	MPI Proposal	Comments
			that biomass is likely to continue to increase. FNZ is proposing options to increase the TACs and TACCs of SKI 3 and SKI 7 to enable greater utilisation of the stocks.	hoki target fishery whereas the majority of the gemfish catch in SKI 3 occurs while fishing for squid on the Stewart-Snares shelf." The reduction in the hoki catch limit and changes in the squid fishery could reduce the current over-catch. ECO notes that gemfish have been subject to substantial collapses in stocks in New Zealand and Australia. ECO notes that the current CPUE "indices do not provide an estimate of the size of current stock biomass relative to historical (unfished) levels (SSB0). Further: "The magnitude of the recent increase in stock biomass is dependent on the strength of the recent year classes which are poorly determined." Given this is a cautious approach and results in the lowest risk to the stock, and wider ecosystem. ECO urges MPI to carry out a full stock assessment for gemfish 3 and 7. ECO notes that gemfish is mainly a bycatch in bottom trawling and the management of bottom trawling is still to be sorted. ECO welcomes the greater recognition of the habitats of significance for fisheries management in the discussion paper. While the considerations are not sufficient they are a step forward.

Species	Stock	MPI Change	MPI Proposal	Comments
Rough and smooth skates	**RSK 8 & SSK 8 West Coast North Island**	↑	Catches of RSK 8 have been consistently above the TACC since the stock's introduction to the QMS in 2003. Catches for SSK 8 have exceeded the TACC since 2007/08 and have been particularly high in the past five years. These trends in catches could suggest that there is an opportunity to provide for increased utilisation and that the current TACCs may no longer be appropriate. FNZ is proposing options to increase the TACs, TACCs and deemed values for both RSK 8 and SSK 8 to align with recent trends in the fisheries and provide for greater utilisation.	ECO does not support and increase in the skate TACCs. This is a cautious approach and results in the lowest risk to the stock, and wider ecosystem. ECO supports the status quo option. ECO notes this is a skate species, has low fecundity, and there is uncertainty over the sustainability of the stock. There is some uncertainty around the cause of these increasing catch trends which could be due to some method changes. ECO notes that "since 2003, most RSK 8 and SSK 8 catch (94% and 70% respectively) has been taken by bottom trawling. RSK 8 has always been caught predominantly by bottom trawl." And "Since 2019 catch for both stocks has been almost exclusively taken by bottom trawl." ECO notes that "it is unknown if recent catch levels or the TACCs are sustainable or at levels that will allow the stocks to remain at a size that will support the maximum sustainable yield." ECO urges MPI to carry out a broader stock assessment for skate species stocks. ECO notes that skates are mainly caught in bottom trawling and the management of bottom trawling is still to be sorted.

Species	Stock	MPI Change	MPI Proposal	Comments
				ECO welcomes the greater recognition of the habitats of significance for fisheries management in the discussion paper. While the considerations are not sufficient they are a step forward.
Blue warehou	**WAR 2 & WAR 8** **Taranaki, Wellington, East Cape, Hawke's Bay**	↓	Commercial landings WAR 2 and WAR 8 have been trending downwards over the past decade and in the last fishing year, WAR 2 and WAR 8 landings were <10% and 30% of the TACC, respectively. While current catch levels are unlikely to pose sustainability risks, there is uncertainty as to whether catches would be sustainable if the TACCs were fully utilised. FNZ is proposing options to set the TACs and allowances for WAR 2 and WAR 8 and decrease the TACC to ensure catches remain sustainable in the future.	ECO supports option 3 catch reductions. This is a cautious approach and results in the lowest risk to the stock, and wider ecosystem. ECO notes option 3 would reduce the catch to a level that is still greater than recent catches. ECO notes that WAR 2 and WAR 8 are low knowledge stocks with no reliable estimates of biomass or yield. ECO notes that the plenary report discussion of blue warehou has really not been updated since 2006-07 and needs updating. ECO urges MPI to carry out a broader stock assessment for blue warehou stocks. ECO notes that: The main fishing method that captures: • WAR 2 is bottom trawl (approx. 75% total catch), with a lower proportion taken by set nets. • WAR 8 is set net (approx. 70% total catch) with a smaller proportion taken by bottom trawl.

Species	Stock	MPI Change	MPI Proposal	Comments
				ECO notes the level of bottom trawling in WAR2 and the management of bottom trawling is still to be sorted. ECO welcomes the greater recognition of the habitats of significance for fisheries management in the discussion paper. While the considerations are not sufficient they are a step forward.
West Coast South Island multi-species **(snapper, red gurnard and rig)**	**SNA 7, GUR 7 & SPO 7 West Coast and Top of South Island**	– / ↓	Recent stock assessments and other information suggests that there is an opportunity to provide for greater utilisation of SNA 7 and GUR 7. Rig is caught as associated bycatch in these fisheries, so an adjustment to management settings of SPO 7 may also be appropriate in line with changes to utilisation of those stocks. FNZ is proposing options to increase the TACs and TACCs of SNA 7 and GUR 7, and an option to adjust the TAC, allowances and TACC for SPO 7 in line with best available information on the fishery.	ECO supports Option 1 for each of the stocks considered. This is a cautious approach and results in the lowest risk to the stock, and wider ecosystem. ECO supports the status quo option. For Rig (SPO7): ECO notes this is a shark species, has low fecundity, and there is uncertainty over the sustainability of the stock. ECO notes there has been a decline in the 2021 WCSI trawl survey index for rig over several surveys. ECO notes Rig 7 was increased 2 years ago and the most recent catch is below the increased level of catch. The Plenary report notes: Overfishing is about as likely as not to be occurring ECO is concerned that the default management target it too low for a shark species like rig (see comments on Harvest Strategy Standard).

Species	Stock	MPI Change	MPI Proposal	Comments
				For SNA7: ECO does not support management targets less than 50%Bo. ECO notes the uncertainties in the assessment: "The base model provides estimates of current stock status that are quite uncertain, primarily due to the uncertainty associated with the estimates of the strength of recent recruitment (2017 year class). There is also uncertainty associated with the scale of the increase in stock abundance due to differential trends in the increase of the two principal abundance indices and the associated assumptions regarding fishery/survey selectivities." ECO notes that there has been some information on the loss of genetic diversity (which is part of biodiversity) in this stock: Bernal-Ramírez et al (2003) estimated genetic diversity and confidence limits for snapper in Tasman Bay and the Hauraki Gulf. They showed a significant decline of both mean heterozygosity and mean number of alleles in Tasman Bay, …. In Tasman Bay, there was a decrease in genetic diversity at six of seven loci examined, compared with only one in the Hauraki Gulf. Bernal-Ramírez et al (2003) associated this decline with overfishing of the SNA 7 stock and estimated the effective population size in Tasman Bay declined to a low level between 1950 and 1998." ECO notes that: Since 2016 commercial trawl fishers have progressively shifted to deeper water and there has been a simultaneous

Species	Stock	MPI Change	MPI Proposal	Comments
				reduction in headline height of trawl gear to minimise snapper catch. For GUR3: ECO notes that this stock has only been reviewed 2 years ago and the catch limit is still under the most recent catch. ECO notes that these species are mainly caught in mixed species bottom trawling and the management of bottom trawling is still to be sorted. ECO welcomes the greater recognition of the habitats of significance for fisheries management in the discussion paper. While the considerations are not sufficient they are a step forward. Currently there is no management plan for inshore fisheries under the Fisheries Act. MPI should work towards completing a fisheries management plan as a priority.
Blue cod	**BCO 7 - West Coast and Top of South Island**	↓	BCO 7 is an important domestic shared fishery. While recent surveys suggest the overall abundance of blue cod has remained fairly stable since 2017, the fishery is below the target biomass and all indicators point to fishing pressure reducing the size and abundance of blue cod in the main fishing area of the	ECO supports option 2 catch reduction. This is a cautious approach and results in the lowest risk to the stock, and wider ecosystem. ECO notes that Plenary reports the biomass status in relation to the soft and hard limits is unknown, and that the current status of BCO 7 is below the target (45%) and overfishing is likely (>60%) to be occurring. ECO notes: Blue cod is categorised as a low productivity species, on account of the complex sex change behaviour which results in heavily exploited

Species	Stock	MPI Change	MPI Proposal	Comments
			Marlborough Sounds. FNZ is proposing options to set the TAC and allowances of BCO 7, and to decrease the TACC to reduce fishing pressure. Fisheries New Zealand is also seeking feedback on whether other measures, such as extending the closed season or voluntary approaches, would help recovery of the stock towards its management target.	populations having few females. It is relatively long lived with a maximum age of 32 years. Generally, blue cod exhibit a constrained home range and are, therefore, susceptible to localised depletion. ECO notes that: "Blue cod are very aggressive predators and are likely to be key stone species on reefy/gravel areas within the Sounds. Reducing biomass is therefore likely to impact the ecosystem." ECO notes: "The greatest threats to blue cod recruitment are likely to be from climate change, particularly changes in water temperature and water circulation. Blue cod thrive in cooler waters." ECO welcomes the greater recognition of the habitats of significance for fisheries management in the discussion paper. While the considerations are not sufficient they are a step forward. This aspects should be developed further by MPI in consultation with the blue cod working group. ECO notes that commercially landed blue cod in BCO 7 are mostly caught by target cod potting. ECO notes that the Marlborough Sounds Area is closed to both commercial and recreational fishing from 1 September until 19 December inclusive. Currently there is no management plan for inshore fisheries under the

Species	Stock	MPI Change	MPI Proposal	Comments
				Fisheries Act. MPI should work towards completing a fisheries management plan as a priority.
Red gurnard	**GUR 3** **East Coast South Island, Chatham Rise, Southland, Sub-Antarctic, Rakiura and Fiordland**	↑	Recent assessments for East Coast South Island trawl species indicate that the GUR 3 stock has continued to increase in abundance since the stock was last reviewed in October 2020 and there is an opportunity to provide for greater utilisation. FNZ is proposing options to increase the TAC, TACC, and allowances for GUR 3 to enable greater utilisation of the stock.	ECO supports a cautious approach and results in the lowest risk to the stock, and wider ecosystem. ECO supports the status quo option. ECO notes that the stock was only last reviewed in October 2020. ECO notes that the target level of 35% is not supported. "The 2022 quantitative stock assessment indicates that GUR 3 is very likely (>90%) to be above target levels of 35% *SB0*." ECO notes that this stock was previously part of the adaptive management framework. ECO notes the forward projections in the plenary report indicate the stock will increase and then decline to below the stock size it currently is with current catches. Currently there is no management plan for inshore fisheries under the Fisheries Act. MPI should work towards completing a fisheries management plan as a priority. ECO welcomes the greater recognition of the habitats of significance for fisheries management in the discussion paper. While the considerations are not sufficient they are a step forward.

Species	Stock	MPI Change	MPI Proposal	Comments
Rig	**SPO 3** **East Coast South Island, Chatham Rise, Southland, Sub-Antarctic, Rakiura and Fiordland**	↑	Recent assessments and biomass estimates for rig in SPO 3 are variable and uncertain, however, they indicate biomass in SPO 3 could be increasing. FNZ is seeking feedback on whether there is an opportunity for a modest increase in the TAC and TACC of SPO 3.	ECO does not support and increase in the rig TACC. This is a cautious approach and results in the lowest risk to the stock, and wider ecosystem. ECO supports the status quo option. ECO notes this is a shark species, has low fecundity, and there is uncertainty over the sustainability of the stock. Rig 3 was increased 2 years ago and the most recent catch is below the increased level of catch. The Plenary report notes: "Overfishing is Likely (> 60%) to be occurring". ECO is concerned that the default management target it too low for a shark species like rig (see comments on Harvest Strategy Standard). MPI should work towards a full assessment of this fishery. This should include a review of the appropriateness of harvest strategy default levels for sharks, including the target biomass. Currently there is no management plan for inshore fisheries under the Fisheries Act. MPI should work towards completing a fisheries management plan as a priority. ECO is concerned over: • The potential level of Hector's dolphin bycatch in this fishery. • White-flippered, Fiordland crested and yellow-eyed penguins catch in

Species	Stock	MPI Change	MPI Proposal	Comments
				gill net fisheries on the east coast of the South Island. ECO welcomes the greater recognition of the habitats of significance for fisheries management in the discussion paper. While the considerations are not sufficient they are a step forward.
Attached bladder kelp	**KBB 3G & 4G - East coast and Chatham Islands**	↓	Bladder kelp has an important role in coastal and marine ecosystems and provides critical habitat for other important marine species. Information since these stocks were included in the QMS suggests the spatial extent of the kelp beds in KBB 3G and 4G has declined. FNZ is proposing options to lower the TACs and TACCs for KBB 3G and 4G to ensure that commercial harvests remain sustainable in the future.	ECO supports the reductions of 75% as the minimum without further information given the ecological importance of kelp beds. ECO notes that even with a 75% reduction the current catches would be below the TACC. Actually a reduction of closer to 90% would have little impact on catches. ECO notes the original catch estimates were based on little information. What information was available was limited to a few areas, was time-limited and there was no indication of biomass at the "FMA level". ECO Notes there has been no review of KBB 3G and KBB 4G since QMS introduction. ECO notes the wider concern about the impacts of heatwaves resulting in documented declines in kelp. Further: "recent survey along the east coast, including Banks Peninsula and Otago, demonstrates reduced surface canopies of bladder kelp during and after the 2017-18 marine heatwaves.

Species	Stock	MPI Change	MPI Proposal	Comments
				Kelp are ecologically important species with important cultural values. ECO notes that in addition an increase in kina barrens in some areas and increased coastal sedimentation caused by agriculture and urbanisation are likely to be ongoing contributors to a decline in kelp. Kelp beds would meet the criteria of habitats of significance for fisheries management given they are habitat forming, they support many other marine species as food or shelter, and they are foundation species and ecosystem engineers.

[i] Tracey, D., Neil, H., Gordon, D., and O'Shea, S. (2003) Chronicles of the deep: ageing deep-sea corals in New Zealand waters. Water and Atmosphere, 11: 22–24.

[ii] Clark, M. R.; Bowden, D. A.; Rowden, A. A. and Stewart, R. (2019) Little Evidence of Benthic Community Resilience to Bottom Trawling on Seamounts After 15 Years. Frontiers in Marine Science. 26 February 2019 www.frontiersin.org/articles/10.3389/fmars.2019.00063/full

29 July 2022

2022 Sustainability Review
Fisheries Management
Fisheries New Zealand
PO Box 2526
Wellington 6140

By email: FMsubmissions@mpi.govt.nz

Review of Sustainability Measures for Hoki (HOK 1) for 2022-23

1. Background

This submission is provided on behalf of owners of HOK 1 quota owners who are shareholders in Deepwater Group (DWG). Collectively, they own 93% of the quota shares for HOK 1.

DWG has a strong and unified mandate to represent our shareholders, who collectively own some 63% of all commercial quota shares and 91% of the quota shares for all deepwater species, including quota in the fisheries for hake, hoki, jack mackerel, ling, orange roughy, oreos, scampi, southern blue whiting, and squid.

DWG's role is to enable deepwater quota owners to collaboratively realise their vision to be trusted as the best managed deepwater fisheries in the world.

To give effect to this, DWG is a non-profit organisation working in partnership with the Ministry for Primary Industries (MPI), the Department of Conservation and others to enable New Zealand to gain the maximum benefits from our deepwater fisheries resources, managed within the long-term sustainable framework. On behalf of shareholders, DWG undertakes a wide range of science and technology projects alongside non-regulatory measures to better understand and manage the hoki fisheries.

2. Hoki Quota Owners' Submission

Owners of hoki quota do not support any change to the HOK 1 TACC for the 2022-23 year, for the following reasons:

1. Catches of hoki are being carefully managed by quota owners within agreed limits below the TACC over recent years (see Table 1). During 2021-22, the TACC was set by the Minister at 110,000 t (with limits of 65,000 t from fishing grounds in the East and 45,000 t from those in the West). Industry is managing catches to 100,000 t (with limits of 55,000 t from East and 45,000 t from West).
2. Quota owners undertake to continue to manage their catches collectively during 2022-23, with the catch levels to be determined by agreement in late August, after a review of the WCSI fishery performance, as has been the case in each of the past four years.
3. Any reduction in TACC will extinguish the option to carry forward uncaught HOK 1 ACE from 2021-22 into 2022-23. Several quota owners have adopted harvest strategies this year, reliant upon accessing ACE managed to be uncaught during 2021-22 and carried forward into 2022-23. This is a consequence of the Government's border restrictions which have precluded access to international labour, upon which

seafood and many other industries are dependent, especially seasonally (such as occurs in the hoki fisheries).

4. Genetically, the best available scientific information indicates the multiple HOK 1 fisheries are comprised of a single panmictic stock. The current status of a single hoki stock is estimated in the 2022 stock assessment to be 40% B_0 (Model 2022A) or 43% B_0 (Model 2022B)[1]. This is not only at or above a level that can produce the MSY, but it is also well within the management target range of 35-50% B_0.
5. Any proposed reduction of the TACC for a stock that is being maintained at or above a level that can produce the MSY, based on an assessment that suggests one locational component of this fish stock is lower than the management target range, is an overreach. This overreach is clear for HOK 1 where there are a number of effective management measures already in place to manage catches from the putative sub-stock components and there are several interpretations of stock status.
6. Given that there are still a number of uncertainties associated with the current stock assessment, which quota owners remain committed to working through with FNZ, hoki quota owners wish to continue with a conservative approach to harvest levels during 2022-23 and for the TACC to remain at 110,000 t.

3. Direct Purchase of Additional Science

Quota owners support FNZ's science programme for hoki, the biomass surveys in particular, while also purchasing additional science, where required, to ensure that these fisheries continue to be managed sustainably.

For hoki, there is a range of scientific projects recently completed and underway that include:

1. **Review of the stock assessment model:** Concerns by quota owners with the apparent misalignment between the performance of the hoki fisheries and some of the outputs of the stock assessment resulted in requests to FNZ for a fundamental review of the stock assessment approach and the assessment model. This work commenced in 2019-20 with a team of scientists and is yet to be completed.
2. **Information required to verify stock and migration hypotheses:** The current assessment model is based on hypotheses that there are two management stocks, with the mixing of juveniles from both on the Chatham Rise and each with defined migration paths. There is scant direct empirical evidence for this hypothesis. With the objective of verifying stock structure, quota owners contracted Plant and Food Research in 2020-21 to undertake a genomics study. The results are that there is a single panmictic genetic stock or population in New Zealand waters, genetically distinct from hoki in Australian waters. Further work is being planned.
3. **Further information to verify model stock structure assumptions:** Further to the objectives of the background information on the hoki stock structure assumptions and the results of the genomic study undertaken by hoki quota owners in 2020-21, DWG is exploring with Oritain, the potential utility of established isotopic/trace element/other clustering analyses to discern hoki stock structure. Oritain is currently designing a pilot study, which uses a panel of 42 trace elements and isotopes, to demonstrate (if possible) any discernible differences with samples of flesh and/or otoliths from hoki from two or three different marine locations (Cook Strait, WCSI and Pegasus) and whether they could be indicative of separate biological stocks or populations.
4. **Assessment of recent recruitment in the 'western' fishery:** The proportion of hoki recruitment onto Chatham Rise that is allocated to the 'western' stock is poorly determined. Consequently, there is considerable uncertainty associated with the stock status and short-term projections for the 'western' component of hoki. The Sub-Antarctic trawl survey does not provide a reliable index of the relative abundance of the younger age classes present in the Sub-Antarctic and WCSI hoki fisheries. A detailed CPUE analysis of the Snares and northern WCSI has been undertaken, which considered the influence of model specifications in the attribution of recruitment between 'eastern' and 'western' components.

[1] Fisheries New Zealand (2022). *Fisheries Assessment Plenary, May 2022: stock assessments and stock status*. Compiled by the Fisheries Science Team, Fisheries New Zealand, Wellington, New Zealand. 1886 p. Hoki Chapter, p 616

This work has been completed and found that the CPUE indices are consistent with trends in fishery vulnerable biomass.

5. **Improved monitoring of juvenile hoki abundance:** A review of the sampling of 1+ year hoki in the Chatham Rise trawl surveys to determine the distributional patterns of young hoki and the efficacy of the sampling design. This work is yet to commence.

4. Industry Management Measures

Management measures in place for New Zealand's hoki fisheries are more complex than just setting a single TACC. Quota owners are concerned that the advice the Minister has received from FNZ officials does not adequately reflect the range of effective management measures already in place by quota owners and does not, therefore, constitute advice based on 'the best available information'.

Industry's self-management of the hoki fisheries includes the following management measures:

1. **Lowering total catches**: Since 2018-19, quota owners have agreed to hold annual hoki catches at between 10,000 tonnes and 20,000 tonnes below the HOK 1 TACC (in three of the past four years) due to concerns that the 'western' fishery (in particular) would perform better if it were to be rebuilt in size. These reductions have been effected by agreement amongst quota owners and are monitored by FishServe. The TACCs, industry catch limits, and annual catches of HOK 1 since 2018-19 are shown in Table 1.

Table 1: HOK 1 catch limits set by Government and by industry 2018-19 to 2021-22. Note: Catch limits in bold demark the years and amounts when industry agreed to set lower limits than those set by the Minister. The catch limit for 2020-21 was set at 95,000 t plus ACE carried forward from 2019-20.

Year	Government Catch Limits (t)			Industry Catch Limits (t)			Catches (t)	ACE			Comments
	HOK 1	HOK 1E	HOK 1W	HOK 1	HOK 1E	HOK1W	HOK 1	Total ACE	Shelved	Available for Catch	
2018-19	150,000	60,000	90,000	**130,000**	60,000	**70,000**	122,460	163,375	30,144	134,586	Carry forward
2019-20	115,000	60,000	55,000	115,000	60,000	55,000	107,737	115,000		115,000	No carry forward
2020-21	115,000	60,000	55,000	**95,000***	50,000	45,000	100,817	121,724	19,505	102,219	Carry forward ~7 Kt
2021-22	110,000	65,000	45,000	**100,000**	55,000	45,000		110,000	9,839	100,161	No carry forward

* In 2020-21, the agreed industry catch limit was set at 95,000 t plus HOK1 ACE carried forward from 2019-20 with the expectation that the total annual catch would be capped at around 102,000 t.

2. **Reducing catches of juvenile hoki:** Since the early 2000s, quota owners have implemented measures to reduce catches of juvenile hoki through spatial management controls within several designated Hoki Management Areas (HMAs). In 2020, DWG contracted NIWA to review these spatial management areas on the Chatham Rise and to quantify the efficacy in reducing fishing mortality on small hoki (i.e. hoki less than or equal to 55 cm). Combined, the existing HMAs on the Mernoo Bank and the Canterbury Banks, along with the mid-Chatham Rise and east Chatham Rise Benthic Protection Areas) protect an estimated 62% of the small hoki on average, with the greatest protection afforded by the Mernoo Bank HMA (which covers an estimated 41% of the small hoki biomass). Quota owners have also undertaken analyses of the costs and benefits of additional closures

3. **Allowing hoki to spawn undisturbed at peak times:** In each of the three major hoki spawning grounds, quota owners have agreed to cease fishing for 7 days within designated Hoki Seasonal Spawn Areas with the objective of leaving hoki undisturbed during peak spawning times

4. **Management Strategy Evaluation (MSE)**: Quota owners have contracted an MSE which has identified the management target range since adopted by FNZ
5. **Developing and implementing a second MSE and Harvest Control Rules (HCRs):** This work is underway, and due to be completed by October 2022. Working with quota owners, scientists have been contracted to develop a more comprehensive MSE, along with HCRs, which will exceed the requirements of both the Fisheries Act 1996 and the Marine Stewardship Council's Fisheries Certification Requirements. This work is prefaced on ensuring biological sustainability while optimising the economic returns to New Zealand's economy from our hoki resources.

5. Hoki Stock Assessments – Key Assumptions, Outputs and Alternatives

The results of the 2022 hoki assessment are predicated on a number of key unvalidated assumptions, the main two being the presumed stock structure and the assumed hoki migration patterns.

Quota owners are concerned that FNZ's advice in their 2022/11 Discussion Paper does not give a full account of these uncertainties nor of the current management measures in place by the industry which will be continued during 2022-23.

In their 2022/11 Discussion Paper, FNZ's advice considers only a two-stock option, not the possibility of a single stock. It does not consider the option of future biomass projections over the next five years with catches remaining at current levels, and does not consider the option of estimating B_0 for the 'Western stock' using recruitment only for the period since 1994, when there was a clear step-change. As such, this advice by FNZ cannot in isolation be considered to be based upon 'the best available information' in terms of the requirements of the Fisheries Act.

DWG has contracted further analyses from NIWA and has taken advice from scientists to provide additional outputs as shown and discussed below:

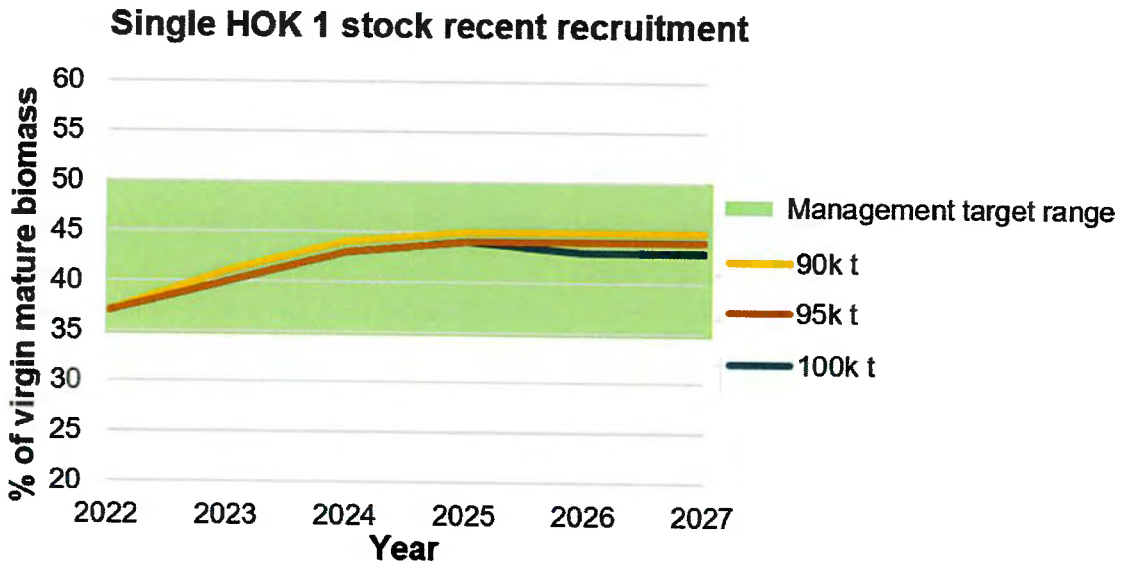

Figure 1: Single HOK 1 stock, B_0 estimated from long-term recruitment, biomass projections estimated from the most recent 10 years of recruitment

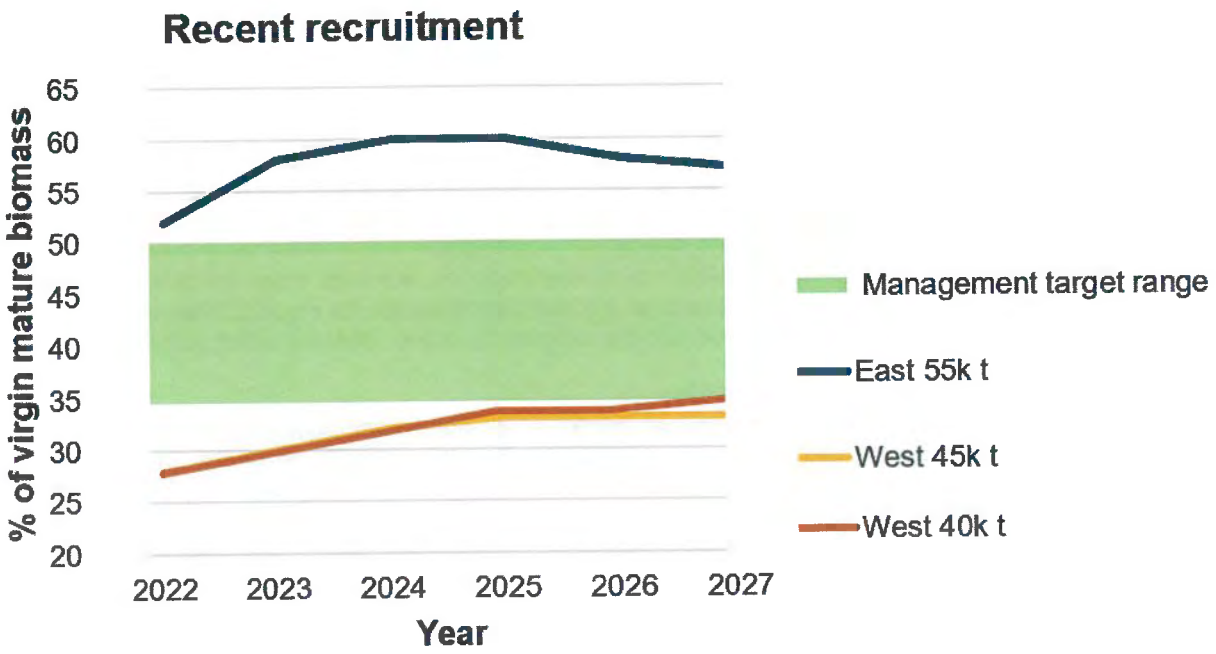

Figure 2: Two HOK 1 stocks, B_0 estimated from long-term recruitment, biomass projections estimated from catches set by industry and the most recent 10 years of recruitment

Figure 3: 'Western' stock, B_0 estimated from recruitment since 1994, biomass projections estimated from catches set by industry and the most recent 10 years of recruitment

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Quota owners consider the options, as shown in Figures 1, 2 and 3, to be valid alternative scenarios to those provided by FNZ in their discussion paper. However, one of the main underlying misspecifications in the options that are considered by FNZ is the misalignment between the way FNZ has chosen B_0 to be estimated and their choice of recruitment in the forward projections.

On the basis that there might be two separate stocks of hoki for management purposes, within the hoki model B_0 is a notional construct that determines the level of unexploited adult biomass corresponding to the long-term average level of recruitment since 1975 (for each of the 'Eastern' and 'Western' stocks).

The estimates of the recent average level of recent recruitment into the 'Western' stock are 30% lower than the estimates of the average level since 1975 and, as this has been the case for close to three decades, this level of recruitment should correctly be factored into the estimations of the 'Western' stock status and for the estimate of B_0.

Each of the forward projections proposed by FNZ estimating stock status over the next five years uses recent recruitment (i.e., that estimated for the period 2009-18). This level of recruitment equates to about 100% of the long-term recruitment level for the 'Eastern' stock and 70% of the long-term recruitment level for the 'Western' stock. Possible reasons for lower average levels of recruitment into the 'Western' stock since 1994 are discussed below. The estimated levels of recruitment used in the assessment model are shown in Figure 4.

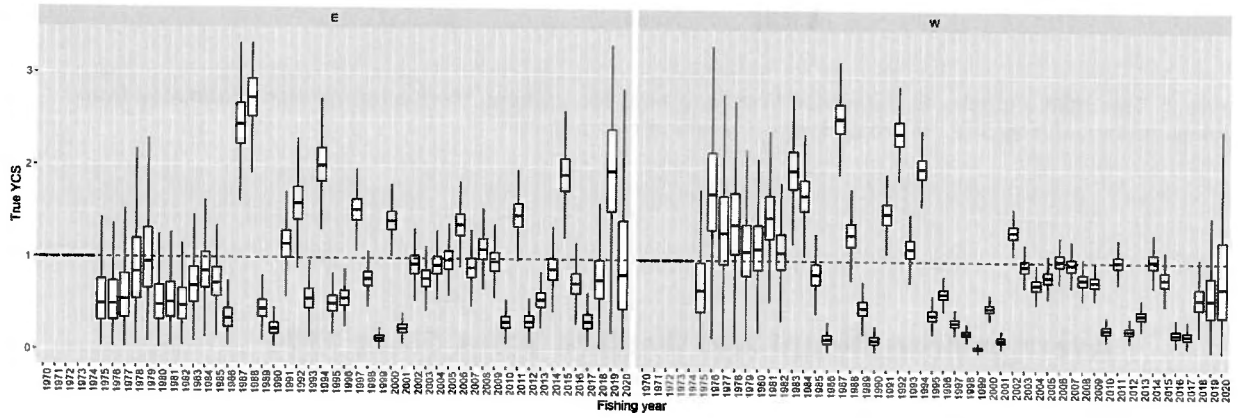

Figure 4: Annual estimates of recruitment since 1975 in each of the 'Eastern' stock (lefthand panel) and the 'Western' stock (righthand panel). Figure from McGregor et al presentation to Plenary, MCMC outputs and projections for hoki assessment 2022, 2 May 2022, page 19.

The application of long-term recruitment estimates for the 'Western' stock as a basis to estimate the unexploited adult biomass (i.e. B_0 for the Spawning Stock Biomass, SSB), when we have recruitment estimates for the past three decades that are 30% below this level is, at best, disingenuous. To do so is to disregard the best available information.

However, this decision is further compounded in the forward projections of the 'Western' stock, as stock status in each of the future five years (2022-27) has been estimated using the ratio of the future biomass (computed from current recruitment, 2009-18) against the unexploited biomass (computed from average long term recruitment, 1975-2020). To use an estimate calculated from a set of parameters for the denominator that is inconsistent with those used for the numerator is tantamount to comparing apples with bananas.

This fundamental flaw of logic arises as fisheries scientists have adopted, by convention, a preference for using all data, including long-term recruitment estimates, without further consideration of environmental dynamics over protracted time periods. This seems an illogical approach when other compelling data exist.

Given the close alignment in estimates of recruitment into the 'Eastern' stock between 1975-2020 and 2009-18, this matter is not considered to be material to projections of 'Eastern' stock status for the period 2022-27.

It is DWG's submission that, for the 'Western' stock, the average recruitment level since 1994 should be used to calculate B_0, given the relative 'stability' of these levels over this time period, when compared with estimated recruitment levels prior to 1994. Given the life history of hoki, almost all of the current population will have been spawned since 1994.

Figure 3 demonstrates the results of reassessing B_0 for the 'Western' stock from the average recruitment levels estimated since 1994 with annual catches of 40,000 t and 45,000 t and average recruitment for the period 2009-18. At all times the stock status is projected to be not only well above a level that can produce the MSY, but to be increasing in size and to be well within the management target range of 35% - 50% B_0.

DWG has been advised a similar matter has arisen in the stock assessment for snapper where the estimates of recent recruitment are higher than those over the long term and where FNZ has proposed the recent time series of recruitment be used, rather than the entire time series, to determine B_0 and therefore stock status.

It is hoki quota owners' submission that the best available information to estimate B_0 for the 'Western' hoki stock is the recruitment time-series since 1994.

The matter of this step-change in the estimated average level of recruitment has been raised in the DWWG by industry a number of times and it has been suggested to the NIWA hoki team that this should be revisited in the 2023 assessment. We note that there are also similarities in changes in recruitment patterns for other stocks, including HAK 7 also on WCSI, which is estimated to have had lower recruitment levels from the 1990s.

For hoki, there are a number of possible drivers, or combinations of these, which could have resulted in lower recruitment. These need to be explored and include:

1. The data/estimates in the times series of recruitment estimates for hoki since 1975 may not be contiguous rendering the time series invalid.
2. Changing environmental conditions along the WCSI during the period since 1975, and possibly in the early 1990s, may have resulted in changes in the spawning success/larval survival rates here.
3. Lower 'western' recruitment might be due to depletion of the 'western' spawning biomass. This seems unlikely as the estimated decline in 'western' recruitment preceded the decline in 'western' biomass, as estimated in the model, to have occurred in the late 1990s and early 2000s.
4. The model may be misattributing 'western' recruitment to 'eastern' recruitment as catches of young hoki increased on the Chatham Rise in the late 1990s. There is the possibility that the E/W year classes are not well resolved by the model from the late 1990s. However, E recruitment did not show a corresponding increase in the model when W recruitment is estimated to have reduced.
5. Possible misspecification of the catch removals when the Chatham Rise fishery shifted to smaller hoki. Does the model extract too few hoki comprising the catch if the conversion between catch in weight to numbers is biased (wrong growth rate, length-weight conversion)? Preliminary investigations suggest it is hard to see this causing the scale of effect observed.
6. Cryptic mortality from the fishery on the Chatham Rise. This may have been an issue in the early 2000s before the Chatham Rise HMA closures came into effect, but more recently the fishery does not operate in the areas of highest juvenile abundance (1 and 2 year-olds).

Quota owners are of the view that changing environmental effects on the WCSI are the strongest likely candidate.

Such environmental/oceanographic changes along the west coast of the South Island may also be evidenced in changes in recruitment levels for HAK, GUR, SNA, KIN, SKI, JDO and this requires a more fulsome and widespread investigation, which quota owners are happy to support.

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6. Summary

Owners of hoki quota do not support any change to the HOK 1 TACC for the 2022-23 year, for the following reasons:

1. The catches by designated sub-area within the HOK 1 QMA have been carefully managed by quota owners in each of the past 13 fishing years (i.e. since 2009-10). In recent years, these catches have been managed by quota owners at levels that are below the TACC. During 2021-22, the TACC was set at 110,000 t (with limits of 65,000 t from East and 45,000 t from West. Industry is managing catches to 100,000 t (with limits of 55,000 t from East and 45,000 t from West).
2. Quota owners undertake to continue to manage their catches collectively during 2022-23, with the catch levels to be determined by agreement in late August 2022, after a review of the WCSI fishery performance, as has been the case in each of the past four years.
3. Any reduction in TACC to obtain a further 5,000 t reduction in the 'western' catch during 2022-23, when proven and effective existing mechanisms are in place to deliver this outcome, should it be required, is unnecessary.
4. Any reduction in the TACC for a stock that is being maintained at or above a level that can produce the MSY, based on an assessment that one locational component of the HOK 1 fish stock is lower than the management target range, is an overreach. This overreach is clear for HOK 1 where there are a number of effective management measures already in place to manage catches from the putative sub-stock components
5. Any reduction in TACC will extinguish the option to carry forward uncaught HOK 1 ACE from 2021-22 into 2022-23. Several quota owners have adopted harvest strategies this year, reliant upon accessing ACE carried forward into 2022-23. This is a consequence of the Government's border restrictions which have precluded access to international labour, upon which seafood and many other industries are dependent, especially seasonally (such as occurs in the hoki fishery).
6. Should the appropriate recruitment assumptions be applied in estimating B_0 for a separately assessed 'Western' stock, the stock status is projected to remain well above the level that will support the MSY, well within the management target range, and continue to increase in size over the next five years with an annual catch of 45,000 t.
7. There remain many uncertainties with the current stock assessment, which quota owners remain committed to working through with FNZ.

Meantime, quota owners wish to continue with a conservative approach to harvest levels and for the TACC to remain at 110,000 t pending further progress to the yet to be completed review of the hoki stock assessment and an improved assessment in 2023.

On behalf of HOK 1 Quota Owners,

George Clement
CEO
Deepwater Group Ltd

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COMMITTED TO HEALTHY OCEANS SUSTAINABLE FISHERIES

22 July 2022

2022 Sustainability Review
Fisheries Management
Fisheries New Zealand
PO Box 2526
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Review of Sustainability Measures for Scampi (SCI 1), Gemfish (SKI 3 & 7) and Deemed Value rates for Kingfish (KIN 3, 7 & 8) for 2022-23

Background

The submission on the proposed changes to SCI 1 is provided on behalf of owners of SCI 1 quota owners who are shareholders in Deepwater Group (DWG). Collectively, they own 86% of the quota shares for SCI 1.

DWG also supports the Southern Inshore Fisheries Management Company (SIFMC) submission on increasing the TACs and TACCs of SKI 3 and SKI 7 and decreasing the deemed value rate of KIN 3, 7 & 8.

DWG has a strong and unified mandate to represent our shareholders, who collectively own 91% of the quota shares for all deepwater species, including quota in the fisheries for hake, hoki, jack mackerel, ling, orange roughy, oreos, scampi, southern blue whiting, and squid.

DWG's role is to enable deepwater quota owners to collaboratively realise their vision to be trusted as the best managed deepwater fisheries in the world.

To give effect to this, DWG is a non-profit organisation working in partnership with the Ministry for Primary Industries (MPI), the Department of Conservation, and others to enable New Zealand to gain the maximum benefits from our deepwater fisheries resources, managed within the long-term sustainable framework. On behalf of shareholders, DWG undertakes a wide range of science and technology projects to better understand alongside non-regulatory measures to better manage the scampi fisheries.

SCI 1

Introduction

DWG refers to the recent Fisheries New Zealand (FNZ) discussion paper which is proposing to increase the TAC and TACC of SCI 1 for the October 2022 sustainability round. FNZ considers that there is an opportunity to increase utilisation of the SCI 1 stock whilst maintaining the status of the stock above the management target.

Three options have been put forward:

Option 1: maintain the status quo – 139 tonnes TAC and 132 tonnes TACC

Option 2: increase the TAC to 153 tonnes and increase the TACC to 145 tonnes

Option 3: increase the TAC to 166 tonnes and increase the TACC to 158 tonnes

deepwater group

Scampi Quota Owners' Submissions

Deepwater Group shareholders who are owners of SCI 1 quota support FNZ's assessment that the SCI 1 stock can support an increase, with the majority of these owners of SCI 1 quota supporting the proposed 20% TACC increase from 132 t to 158 t (**Option 3**).

The science supports that these catch limits will maintain the stocks at or above sustainable limits, as exemplified below.

Quantitative Stock Assessment

Unlike the previous SCI 1 review in 2019, the proposed options are not supported by an accepted fully quantitative stock assessment. No yield estimates and projections are available for SCI 1.[1] In 2022 the Deepwater Fisheries Assessment Working Group (DWWG) rejected the updated assessment of SCI 1 on the basis that the results were considered overly sensitive to the choice of one of the parameters for the model to estimate the trawl survey catchability, and to choices around data weighting.

To this end, DWG supports the exploration of improvement programs by the DWWG that would serve to improve the application of a stock assessment model to SCI 1 including (but not limited to) as listed in the Plenary for SCI 1:[2]

- *Consider combining the SCI 1 and 2 models (separate stocks but sharing of information, in particular around trawl survey catchability).*
- *Further analyse growth parameterisation and the influence on the assessment model's ability to fit the size composition data.*
- *Review the necessity for a highly informed trawl survey q prior.*
- *Review the utility of the photo survey and the interpretation of the images in generating abundance indices for the various scampi stock assessments.*
- *Review the selectivity ogive structures, in particular with respect to the model timesteps and the commercial size structure.*
- *Review the potential impact of changes in emergence and catchability.*
- *Explore CPUE standardisations, including spatial patterns and vessel overlap. Consider interviewing fleet managers and skippers about gear changes over time.*

Catch per Unit Effort (CPUE)

The options proposed this year have been informed by agreement of the 2022 Fishery Assessment Plenary on the status of the stock, based on preliminary results from the 2022 stock assessment. The Plenary agreed that updated Catch per Unit Effort (CPUE) indices indicated that there has been an increase in the abundance of scampi in SCI 1 since 2019 and they estimated that SCI 1 biomass was very likely (> 90%) to be at or above the target biomass and exceptionally unlikely (< 1%) to be below the soft (20% B_0) or hard limit (10% B_0):[3]

> "*The available abundance indices for SCI 1 suggest the stock is higher or as high as it has been over the period 2001 to 2021. CPUE had a large peak in the mid-late 1990s, followed by a decline until 2001 then a stable period from 2001 to 2017, which was also the lowest period for this index […] The CPUE index then increased from 2017 until 2021. There were no surveys in 2019 and 2020, and the 2021 estimate showed a large increase in estimated abundance, more extreme than seen in the CPUE. The photo survey suggested 2018 was a high point in the series, with 2021 either similarly high (visible scampi) or slightly lower (burrow count).*"

[1] Fisheries New Zealand (2022). *Fisheries Assessment Plenary, May 2022: stock assessments and stock status.* Compiled by the Fisheries Science Team, Fisheries New Zealand, Wellington, New Zealand. 1886 p. Scampi Chapter, p 1383

[2] *Ibid.*, pp 1385-1386

[3] *Ibid.*, p 1377

SCI 1: Historical Stock Status Trajectory and Current Status

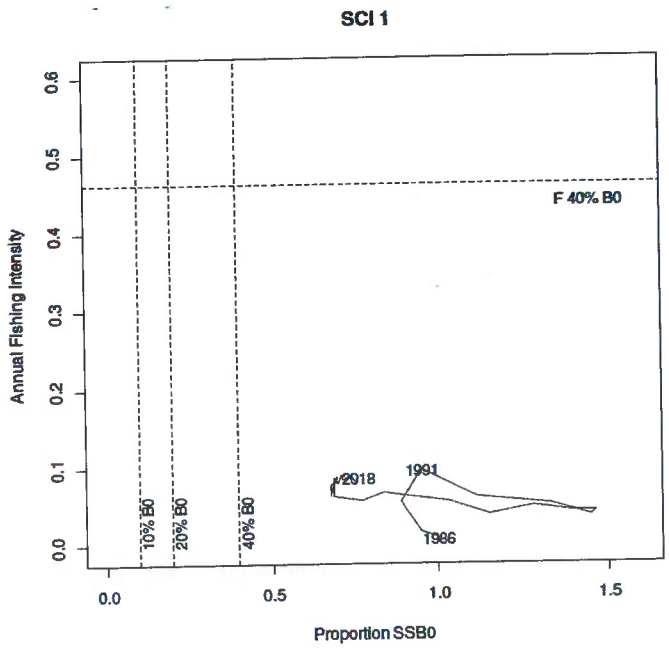

Figure 1: 2019: Trajectories of biomass as a proportion of B_0 and annual equivalent fishing intensity for SCI 1 (M=0.25, CV=0.15).[4]

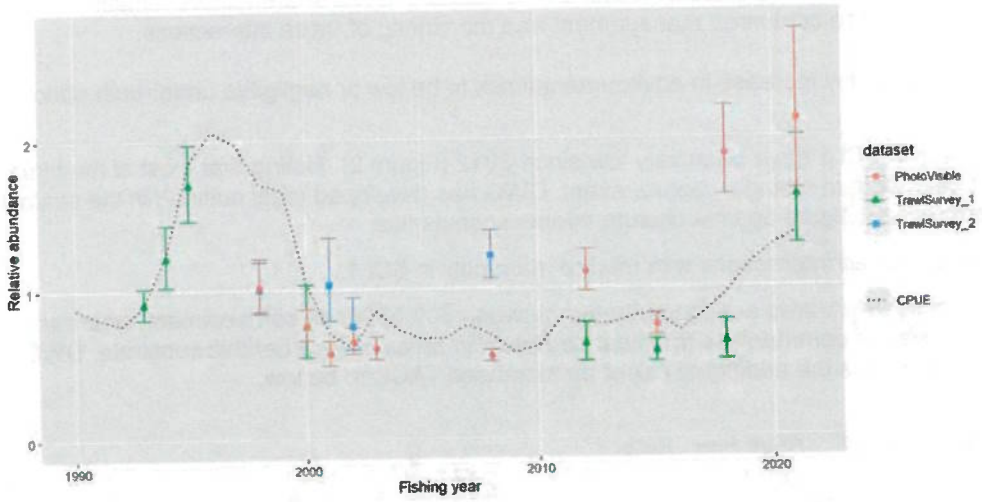

Figure 2: 2022: Mean catch rates and relative abundance (+/- one standard error) of research trawling and photo survey counts for SCI 1. TrawlSurvey_1 is the whole survey area, TrawlSurvey_2 and PhotoVisible are from the core survey strata, with PhotoVisible the visible scampi index). The dotted line represents the median of annual unstandardised CPUE for SCI 1.[5]

[4] Fisheries New Zealand (2022). *Fisheries Assessment Plenary, May 2022: stock assessments and stock status.* Compiled by the Fisheries Science Team, Fisheries New Zealand, Wellington, New Zealand. 1886 p. Scampi Chapter, p 1387

[5] *Ibid.*

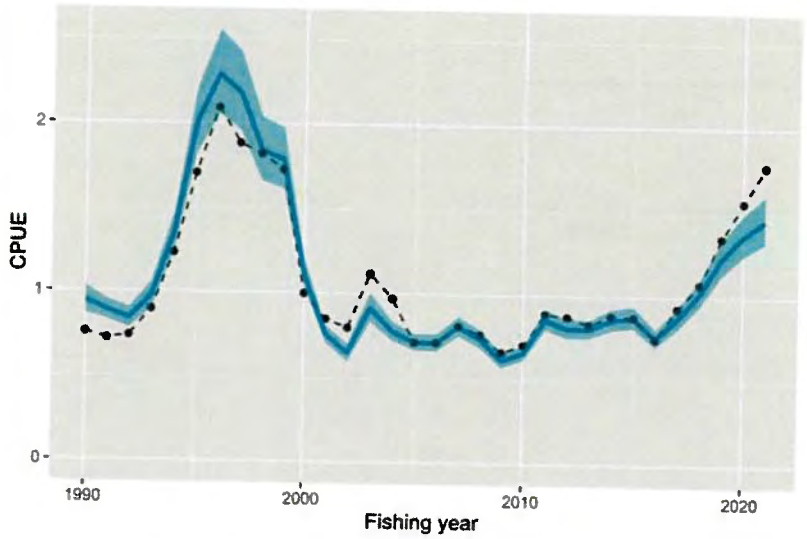

Figure 3: Standardised CPUE for SCI 1 (blue line) with 95% confidence intervals (blue shaded) and raw CPUE (black dashed line and dots) from 1990-2021.

SCI 1: Aquatic Environmental Considerations

DWG supports MPI's assessment of the environmental considerations arising from this increase in SCI 3, including to protected species, to interdependent stocks, and to habitats. DWG shareholders remain committed to and supportive of the continued management and monitoring of these interactions.

Further to this, DWG considers any increase in environmental risk to be low or negligible under both option 2 and option 3.

- Seabird capture events in SCI 1 have been very low since 2012 (Figure 2). Noting that most of the birds caught in the 2011 year were in a single capture event. DWG has developed tools outlined in the scampi Operational Procedures to mitigate against capture events such as this.
- There have been no observed interactions with marine mammals in SCI 1.
- Benthic interactions of scampi trawls are concentrated between 300-500m on soft sediment, whereas most fragile benthic epifauna communities are most abundant in areas of hard benthic substrate. DWG aligns with FNZ and considers the additional risk of an increased TACC to be low.

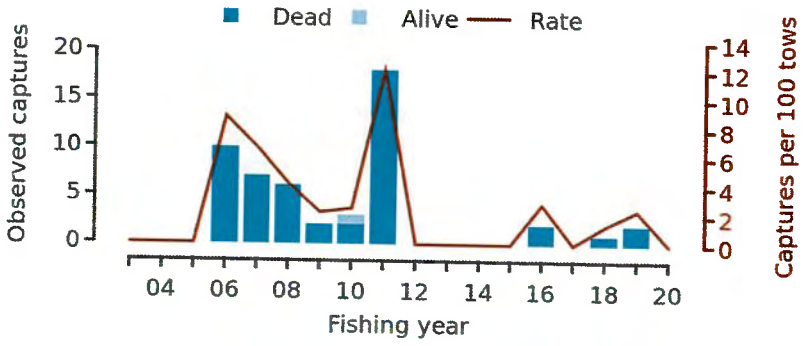

Figure 4: Observed seabird captures in SCI 1 between 2004 and 2020 and capture rate per 100 tows.

deepwater group

Summary

SCI 1

Although the DWWG rejected the assessment, there is considerable evidence to suggest the stock has increased since 2019, and that it is at a level that will support increased utilisation.

To this end, owners of SCI 1 quota can confidently support FNZ's assessment that the SCI 1 stock can sustain an increase, with the majority of DWG shareholder owners of SCI 1 quota supporting a proposed 20% TACC increase from 132 t to 158 t (**Option 3**).

SKI 3 and SKI 7

DWG supports the Southern Inshore Fisheries Management Company (SIFMC) submission on increasing the TACs and TACCs of SKI 3 and SKI 7.

KIN 3, 7 and 8

DWG also supports the submissions of SIFMC with respect to the proposed decreases in deemed values for KIN 3 and KIN 7.

DWG remains happy to provide any further information to support this submission should it be required.

On behalf of SCI 1 Quota Owners,

Aaron Irving
Deputy CEO
Deepwater Group Ltd

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FISHERIES
INSHORE NEW ZEALAND

26 July 2022

Fisheries New Zealand
Ministry for Primary Industries
PO Box 10420
Wellington

REVIEW OF SUSTAINABILITY MEASURES 2022 OCTOBER ROUND
Submission of Fisheries Inshore New Zealand

1. Fisheries New Zealand (FNZ) has invited submissions on the proposed Sustainability Controls for 1 October 2021 stocks. This submission is presented on behalf of Fisheries Inshore New Zealand Ltd (Fisheries Inshore).

2. Fisheries Inshore is the Sector 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, fishers and affiliated sector representative organisations. Its key outputs are:
   - developing appropriate policy frameworks, processes and tools to assist the sector to manage inshore, pelagic and tuna fish stocks more effectively;
   - minimising fishing interactions with protected species and the associated ecosystems; and
   - working positively with other fishers and users of marine space where we carry out our harvesting activities.

3. Fisheries Inshore provides management services through regional committees to the quota owners, fishers and Licensed Fish Receivers of fish stocks in FMA1, 2, 8 and 9. Fisheries Inshore has a species committee for HMS fish stocks and has a close relationship with Southern Inshore Fisheries Management Company Limited, which is also a member of Fisheries Inshore and provides management services to the quota owners of stocks in FMAs 3, 5 and 7 (and some FMA 8 stocks).

4. We have circulated our draft comments to our members and received feedback that has been taken into account in the response. Nevertheless, we note that companies and other quota-holders may also make their own submissions on the proposals.

5. In this submission, we provide general comments on aspects of the consultation documents and process. Following this we provide comments on the stock specific proposals.

Management of Inshore Finfish Fisheries

6. In previous submissions, we have raised our concerns relating to the management of the inshore finfish stocks. Given the absence of any comprehensive progress in this area, we consider it appropriate to raise those issues in the context of this sustainability process. The points we wish to make relate to management processes that set the context for the sustainability round are:

   - The Absence of an Inshore Finfish Strategic Plan

     It appears the most recent strategic plan has succumbed to the same malaise and lack of interest that afflicted its 2010 predecessor. Without the plan, there are no cogent objectives, principles or guidelines for the management of the inshore stocks, meaning that consistent sustained investment to progressively lift the management of these complexes is not occurring.

- The Absence of Stock Specific Management and Monitoring Frameworks

  The majority of inshore target stocks still have no specific management and monitoring frameworks or stock specific management settings in place. Many have had no research into their sustainability or performance since their introduction. The vast majority of by-catch stocks similarly have no management frameworks, settings or research to underpin their management since they were introduced to the QMS. Sustainability research is fragmented, unstructured and inadequate for the effective and timely management of stocks.

- Absence of Sustainability Reviews

  In the past five years, 50 out of 233 inshore stocks had a stock assessment of some form, from which 41 stocks proceeded to sustainability reviews. A further 5 stocks had administrative sustainability reviews to reduce TACC headroom. The abundance of stocks can fluctuate significantly in either direction. The TAC and TACC settings need to reflect that variance though either providing adequate TACC headroom to allow industry to manage the fluctuation of abundance or to provide active and timely TACC reviews. 50 stock assessments in 5 years and 46 TAC reviews in 5 years does not meet the needs for efficient and effective management.

  Several of the stocks in the current consultation fall under the administrative sustainability reviews category that are seeking to reduce TACC headroom, but without sufficient data or an updated characterisation of the fisheries to adequately inform the proposed review.

  Fisheries Inshore requests that future proposed changes to the TACC for any stock start by being informed by updated characterisations of the fishery. We endorse Southern Inshore's comments regarding this concern and their request to develop a more structured approach to the management of those low knowledge and under caught stocks. We are managing for today and tomorrow and with the major changes that industry is facing it will be important to have an accurate assessment of commercial fishing activity.

- Absence of Multi-sectoral Management processes

  FNZ seems reluctant to hold regionally-based cross-sectoral meetings to discuss the performance of stocks, emerging trends and issues and management and research priorities. Allowing the parties to talk might engender a closer relationship between the stakeholders and allow FNZ to facilitate consensus outcomes rather than attempt to deliver unilateral decisions.

7. The QMS requires stocks to be managed in an informed active manner, reacting to changes in environmental and economic factors. While there is a wealth of commercial catch information available, the current delivery model of FNZ is light on information, reactive and slow and dependent on heavy compliance. Fisheries Inshore considers the FNZ current delivery model is not appropriate for a world-leading fisheries management regime.

Sustainability Proposals - Fisheries Inshore Mandated Stocks

RSK8 – Rough Skate

Fisheries Inshore Position: Support Option 2 Increasing the TACC To 37 T.

8. Fisheries Inshore welcomes a review of sustainability measures for both RSK8 and SSK8. Fisheries Inshore has repeatedly requested this – it is long overdue given RSK8 has been overcaught every year since sustainability measures were first set on introduction to the QMS in 2003/04.

9. RSK8 is categorised as a Low Knowledge Stock within the Draft National Inshore Finfish Fisheries Management Plan, whereby changing trends in catch trigger a review of management measures.

10. There is no stock specific approved harvest strategy, no stock assessment methodology approved and no stock specific reference settings for RSK8. There is no current accepted stock assessment for RSK8. A stock assessment for all RSK/SSK stocks was undertaken in 2022 but data from West Coast North Island Independent Trawl Surveys was not reliable to inform an assessment.

11. Prior to the introduction of skates to the QMS, rough and smooth skate were reported under a joint SKA species code. Due to rapid ammonification of the flesh and a lack of demand for the product, prior to QMS introduction,

many skates caught were neither landed nor reported. Notwithstanding the initial TACC being based on an arbitrary split of pre-QMS catches, the known under-reporting of the catch and the initial TACC being set at a level of around 25% below the reported catch, the TAC/TACC has not been reviewed in the 18 years since RSK8 became a QMS stock.

12. Since 2003/04, over $203,000 has been paid in deemed values for RSK8. We view that as quota-holder income taken without due reason by the Crown. That money would have been better spent on research to establish a stock assessment methodology and appropriate harvest settings for the stock.

13. Fisheries NZ have proposed two options for RSK8,
    - retaining the status quo (Option One) or
    - a modest increase in the TAC/TACC (Option two).

14. FNZ proposes no increase to the recreational or customary allowances. We consider that reasonable in the absence of any catch data to the contrary and the recognition that recreational and customary fishers do not see skate as a desirable catch.

15. The proposed TACC increase to 37 tonnes is the average annual catch calculated from the last five fishing years, with a low of 26 t caught in 2018/19 and a high of 46.4t caught in 2020/21. While it is prudent to consider whether Covid-19 disruptions had a negative impact on landings in the 2019-20 fishing year, we consider it appropriate to use the 2019-20 year within the five-year average annual catch calculation. While landings may have been negatively affected, the landings recorded in 2019-20 were similar to preceding years (2016 and 2018) but less that the 2020-21 year.

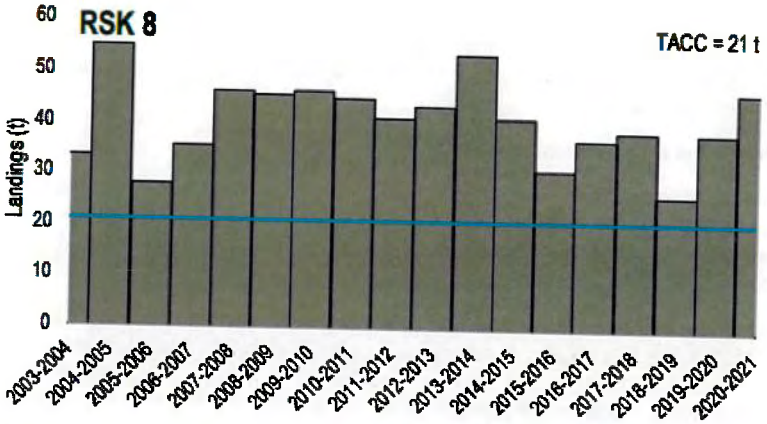


Figure 3: Reported commercial landings (tonnes) and TACC of RSK 8 since 2003 (year of introduction to the QMS).

16. We would have preferred to see FNZ provide a further option that would effectively cover the recent levels of catch and allow for some limited headroom. The deemed values for RSK8 were decreased in 2017 to allow for better incentives for fishers to more accurately report their catch. The level of reported catch in 2020/21 has shown increases. In addition to the reported catch landed, with ER fishers have also reported approximately 8.5 tonnes of RSK8 returns to the sea under Schedule 6 conditions.

17. We note that Fisheries NZ makes a number of statements about risk and implies that Option 2 with a higher TAC, presents a higher risk than Option 1. This is a theoretical statement that over-looks the reality that under the status quo (Option 1) the annual catch has been consistently overcaught, on average to the TACC proposed in Option 2. Consequently, the actual risk is no greater in Option 2 than it is in Option 1.

18. We agree with the statement made in para 77 of the FNZ paper that Option 2 is unlikely to cause any significant increase to the amount of catch. RSK8 is caught exclusively as unavoidable and unwanted bycatch when targeting more valuable species.

19. The current TAC and TACC are set very low and the average annual catch since 2003 has been 40.7 tonnes. Given the stability of landings since 2003, It is unlikely that overfishing has occurred and that the annual landings have been consistent with the objective of maintaining the stock at or above a level that can produce the MSY.

20. We consider the statement made in para 75 of the FNZ paper that there is no information to suggest that increasing the TAC in Option 2 would present a significant sustainability risk is overly cautious. The information available does not indicate that the TAC/TACC in Option 2 presents a sustainability risk, but rather it suggests that Option 2 is sustainable and consistent with the Act.

21. We support exploring methods to monitor the stock in the future, particularly if trends indicate there is issue with the stock. Notwithstanding that any catch is bycatch, this could include a CPUE trip-based analysis using commercial fishing data given the independent trawl survey data has proven to be unreliable for such an analysis.

22. We agree with FNZ's assessment that there is unlikely to be any increased economic benefits from increased utilisation due to its low market demand and value and given it is caught as a bycatch and the proposed TACC increase is in line with current catch levels. We do, however, consider there will be considerable economic benefit from cost savings associated with reduced deemed value payments as a result of an increased and appropriately set TACC.

23. We note that, as a Schedule 6 species, the desirability for skate to retain an exemption status for landing will be reviewed with the introduction of a new landings and returns policy as foreshadowed in the Fisheries Amendment Bill. Given its ammoniating properties with consequences for spoiling the rest of the catch, we would expect that the exemption should continue – but any change in the requirement to land skate will necessitate a review of the RSK8 TACC.

SSK8 – Smooth Skate

Fisheries Inshore Position: Support Option 3 Increasing the TACC To 53 T.

24. Since much of what has been submitted above for RSK8 applies equally for SSK8, we have repeated the content below for SSK8.

25. Fisheries Inshore welcomes a review of sustainability measures for both RSK8 and SSK8. A review has been long overdue given SSK8 has been overcaught in the last 14 years since sustainability measures were first set on introduction to the QMS in 2003/04.

26. SSK8 is categorised as a Low Knowledge Stock within the Draft National Inshore Finfish Fisheries Management Plan, whereby changing trends in catch trigger a review of management measures.

27. There is no stock specific approved harvest strategy, no stock assessment methodology approved and no stock specific reference settings for SSK8. There is no current accepted stock assessment for SSK8. A stock assessment for all RSK/SSK stocks was undertaken in 2022 but data from West Coast North Island Independent Trawl Surveys was not reliable to inform an assessment.

28. Prior to the introduction of skates to the QMS, rough and smooth skate were reported under a joint SKA species code. Due to rapid ammonification of the flesh and a lack of demand for the product, many skates caught were neither landed nor reported, prior to QMS introduction.

29. Notwithstanding the initial TACC being based on an arbitrary split of pre-QMS catches, the known under-reporting of the catch and the initial TACC being set at a level of around 25% below the reported catch, the TAC/TACC has not been reviewed in the 18 years since SSK8 became a QMS stock.

30. Since 2003/04, over $160,000 has been paid in deemed values for SSK8. We view that as quota-holder income taken without due reason by the Crown. That money would have been better spent on research to establish a stock assessment methodology and appropriate harvest settings for the stock.

31. Fisheries NZ have proposed three options for SSK8,
    - retaining the status quo (Option One) a TAC/TACC of 24/20 t respectively or
    - an increase in the TAC/TACC to 49/43 t respectively (Option two or).
    - An increase in the TAC/TACC to 60/53 t respectively (Option 3)

32. The increases proposed by Fisheries NZ to the TACC are calculated in the case of Option 2 as the average catch of the past ten years and, in respect of Option 3, the last five years.

33. FNZ proposes no increase to the recreational or customary allowances. We consider that reasonable in the absence of any catch data to the contrary and the recognition that recreational and customary fishers do not see skate as a desirable catch.

34. SSK8 has been consistently over-caught since 2007/08. Fisheries NZ highlight that there is an increasing trend of larger catches over the last five years and have attributed this trend to a number of possible factors including:
    - increased targeting of TAR in deeper waters of preferred SSK habitat,
    - changes to trawl gear and fishing to target GUR and avoid SNA8, and
    - the displacement of effort since the introduction of the Maui Dolphin closures.

35. Looking back further, landings of SSK8 have had an increasing trend since QMS introduction with 5-year averages of 13.7 t (2003-08), 29.3 t (2008-13), 39 t (2013-18) and 56.4 t (2018-21).

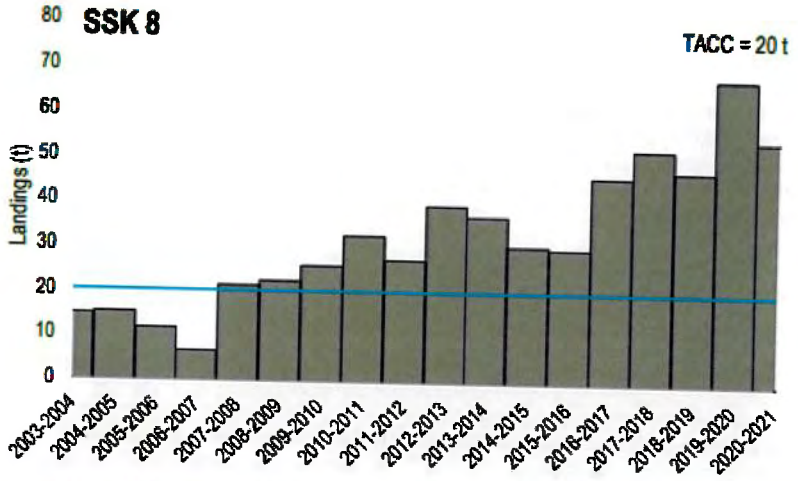


Figure 4: Reported commercial landings (tonnes) and TACC of SSK 8 since 2003 (year of introduction to the QMS).

36. We concur with comments made by FNZ as to the reasons for the recent and continuing increases in SSK8 catches. We see no reason why the level of catches should decline and we agree with the statement that Option Three is unlikely to cause any significant increase to the amount of catch. SSK8 is caught exclusively as unavoidable and unwanted bycatch when targeting more valuable species.

37. We note that Fisheries NZ makes a number of statements about risk and implies that Option Three in particular with a higher TAC, presents a higher risk than Option One. This is a theoretical statement that over-looks the reality that under the status quo of Option One the annual catch, has and continues to be, consistently overcaught - on average to the TACC proposed in Option 3. Consequently, the actual risk is no greater in Option 3 than it is in Option One.

38. We support the statement in para 92 that there is no information to suggest that this option would present a significant sustainability concern, however there is uncertainty. We agree that under Option 3 FNZ should continue to monitor SSK 8 landings and undertake a further review of the TAC and allowances if required. To that end, we support exploring methods to monitor the stock in the future, particularly if trends indicate there is issue with the stock. Notwithstanding that any catch of SSK8 is bycatch, this could include a CPUE trip based analysis using commercial fishing data given the independent trawl survey data has proven to be un-reliable for such an analysis.

39. We agree with Fisheries NZ's assessment that there is unlikely to be any increased economic benefits from increased utilisation due to its low market demand and value and given it is caught as a bycatch and the proposed TACC increase is in line with current catch levels. We do, however, consider there will be considerable economic benefit from cost savings associated with reduced deemed value payments as a result of an increased and appropriately set TACC.

40. We note that, as a Schedule 6 species, the desirability for skate to retain an exemption status for landing will be reviewed with the introduction of a new landings and returns policy as foreshadowed in the Fisheries Amendment Bill. Given its ammoniating properties with consequences for spoiling the rest of the catch, we

would expect that exemption should continue – but any change in the requirement to land skate will necessitate a review of the RSK8 TACC.

WAR2

FISHERIES INSHORE POSITION: SUPPORT OPTION 2 DECREASING THE TACC TO 260 t.

41. FNZ are proposing to introduce a TAC for WAR2 and to significantly reduce to the TACC with three options –
    - Option 1 the status quo (577 t),
    - Option 2 (260 t) a reduction of 55% and
    - Option 3 (150 t) a reduction of 74%.

42. WAR2 is categorised as a Low Knowledge Stock in the Draft National Inshore Finfish Fisheries Management Plan, whereby changing trends in catch trigger a review of management measures. There is no stock specific approved harvest strategy, no stock assessment methodology and no stock specific reference settings for WAR2.

43. Fisheries NZ's rationale for Option 2 is premised on changes to fishing effort within FMA2 for the reduction in WAR2 landings, where-as Option 3 is premised on a reduction to biomass levels of WAR2 within FMA2 raising sustainability concerns.

44. Fisheries Inshore supports Option 2 and the premise that decreased landings are due to changes in fishing effort due to a number of factors. Feedback from fishers received by Fisheries Inshore supports this position.

45. Fisheries Inshore notes that FNZ make a number of statements about risk and implies in Option 3 that the declining trends in catch are in part driven by declining abundance. Fisheries Inshore does not support this statement and considers there is no evidence to support that the declining catch is a result of declining abundance.

46. Fisheries Inshore considers that a characterisation of the fishery should have been undertaken to better understand the changes that have occurred over recent years prior to developing the management options for WAR2.

47. Fisheries Inshore see WAR2 as an example of FNZ's administrative action to lower the TACC without sufficient data or an updated characterisation to better understand the dynamics of this fishery. We again, endorse Southern Inshore's comments regarding the same issues with WAR8 and request that future proposed changes to the TACC for any stock are supported by updated and relevant characterisations of the fishery.

48. Discussions with fishers and licensed fish receivers that have been active in the fishery have highlighted a number of factors that have resulted to changes in fishing effort for WAR2. These include:

    - Loss of access to fishing grounds due to closures introduced by the Hector's and Maui Threat Management Plan (TMP).
    - A loss of many significant vessels and operators from the fishery over the past decade, and recently in response to increasing regulatory costs and commitments from the implementation of ER/GRP and cameras, and rising fuel costs.
    - Changes to fleet dynamics and gear technology. Fishers using Precision Seafood Harvesting gear (PSH) are not permitted to target warehou as a condition on the regulatory approval for using PSH. Consequently, several key operators that use PSH gear in FMA2 are no longer contributing to the current catch profile.
    - The lack of available ACE for SNA2, TAR2 and SKI2 has resulted in avoidance behaviour by fishers targeting other stocks. The decision to delay proposing any changes to the TACC for SNA2 has additional repercussions for fishers catching WAR2. Fisheries Inshore has continually been requesting an increase to the SNA2 TACC to relieve it as a choke species for other stocks in FMA2.

49. Fisheries Inshore supports Option 2 to decrease the TACC to 260 t. In doing so, the retention of some head room for WAR2 will allow fishers to increase catch of WAR2 when constraints on fishing effort change or are removed.

50. Fisheries Inshore does not support Option 3 as there is no evidence there is a sustainability risk to the stock, nor do we agree a TACC of 150 t is justified as it would inappropriately constrain catch of WAR2 when constraints on fishing effort change or are removed.

DEEMED VALUE PROPOSALS

The Deemed Value Guidelines

51. Section 75(2), of the *Fisheries Act 1996* requires the Minister when setting interim, annual and differential deemed values to provide an incentive for every commercial fisher to balance their catch with ACE.

52. However, where the deemed value, annual or differential, exceeds the price the fisher is likely to receive for their catch and no ACE is available OR the price of available ACE is higher than the deemed value then the deemed value is no longer an incentive to balance catch with ACE but is instead an incentive to misreport the catch.

53. Reporting catch where the cost of landing the catch, in terms of ACE or deemed values, is higher than the revenue received for the catch results in a negative net price or loss to the fisher for those fish. The greater the loss, the less likely the fisher is to land the fish. This is particularly so when there is insufficient ACE available in the market to cover additional catch.

54. Based on these principles, we emphasise deemed values must not be used as a substitute for TACC setting and attempts to use the deemed value regime to 'defend' an inappropriate TACC (and subsequent unavailability of ACE) risks generating undesirable incentives such as discouragement of accurate catch reporting. This has been recognised by the Deemed Values Working Group that identified:

> *"The primary purpose of the deemed values regime is to provide incentives for individual fishers to acquire or maintain sufficient ACE to cover catch taken in the course of the year, while:*
>
> - *Allowing flexibility in the timing of balancing;*
> - *Promoting efficiency; and*
> - *Encouraging accurate catch reporting"*

55. It is against that background that we comment on the FNZ deemed value proposals for 2022.

FISHERIES INSHORE MANDATED STOCKS

RSK8

FISHERIES INSHORE POSITION: SUPPORT OPTION 1 – TO RETAIN THE STATUS QUO.

56. The deemed values for RSK8 were decreased in 2017 due to the delayed implementation to increase the TACC of RSK 8 and SSK 8. They are currently lower than the deemed values for other skates.

57. We note that a lower deemed value for RSK8 is consistent with the port price for RSK8 being lower than other RSK port prices. The port prices are based on returns from Licensed Fish Receivers in each stock.

PORT PRICES RSK										
Stock	**2013-14 Port Price kg**	**2014-15 Port Price kg**	**2015-16 Port Price kg**	**2016-17 Port Price kg**	**2017-18 Port Price kg**	**2018-19 Port Price kg**	**2019-20 Port Price kg**	**2020-21 Port Price kg**	**2021-22 Port Price kg**	**2022-23 Port Price kg**
RSK1	0.60	0.60	0.25	0.26	0.19	0.21	0.20	0.47	0.39	0.34
RSK3	0.48	0.50	0.51	0.52	0.46	0.45	0.45	0.47	0.95	0.51
RSK7	0.51	0.50	0.56	0.55	0.48	0.48	0.47	0.50	0.49	0.50
RSK8	0.39	0.51	0.25	0.31	0.26	0.23	0.26	0.44	0.37	0.33

58. Notwithstanding the increase in TACC, it remains below the existing reported catch levels for recent years and whereas a more equitable approach may have been to provide a TACC option that provided limited headroom over existing catches, FNZ has chosen to set the TACC at a level where deemed values are expected.

59. In the absence of any perceived sustainability issue, we can see no valid reason for that decision. However given that decision it seems only equitable that the deemed value rate should remain at the status quo level. That will encourage fishers to continue to report catches accurately.

SSK8

FISHERIES INSHORE POSITION: SUPPORT OPTION 1 – TO RETAIN THE STATUS QUO.

60. The deemed values for SSK8 were decreased in 2017 due to the delayed implementation to increase the TACC of RSK 8 and SSK 8. They are currently lower than the deemed values for other skates.

61. We note that a lower deemed value for SSK8 is consistent with the port price for SSK8 being lower than other SSK port prices. The port prices are based on returns from Licensed Fish Receivers in each stock.

PORT PRICES SSK										
Stock	2013-14 Port Price kg	2014-15 Port Price kg	2015-16 Port Price kg	2016-17 Port Price kg	2017-18 Port Price kg	2018-19 Port Price kg	2019-20 Port Price kg	2020-21 Port Price kg	2021-22 Port Price kg	2022-23 Port Price kg
SSK1	0.48	0.50	0.32	0.23	0.19	0.20	0.21	0.44	0.22	0.22
SSK3	0.45	0.45	0.44	0.45	0.46	0.42	0.43	0.44	0.49	0.49
SSK7	0.58	0.49	0.50	0.48	0.49	0.46	0.40	0.48	0.46	0.49
SSK8	0.47	0.49	0.33	0.38	0.35	0.28	0.30	0.45	0.31	0.27

62. Notwithstanding the increase in TACC, it remains below the existing reported catch levels for recent years and whereas a more equitable approach may have been to provide a TACC option that provided limited headroom over existing catches, FNZ has chosen to set the TACC at a level where deemed values are expected.

63. In the absence of any perceived sustainability issue, we can see no valid reason for that decision. However, given that decision it seems only equitable that the deemed value rate should remain at the status quo level. That will encourage fishers to continue to report catches accurately.

KIN8 (and 7 noting that Southern Inshore holds the KIN7 mandate)

FISHERIES INSHORE POSITION: SUPPORT THE PROPOSED DEEMED VALUE DECREASE FOR KIN8.

64. The decreased deemed value rate will reduce unnecessary high costs incurred by fishers whilst maintaining a strong incentive to return live fish to the sea.

65. There is currently no sustainability concern with KIN8 (or KIN7). The stock is considered to be stable and at a high level, with KIN8 showing a strong increasing catch trend since 2014. Our preference in these circumstances would be to increase the TAC/TACC rather than decrease the deemed values.

66. It is on that basis that we also endorse Southern Inshore's comments on the proposed deemed values for KIN7.

SNA2

FISHERIES INSHORE POSITION: SUPPORT THE PROPOSED DECREASE IN THE DEEMED VALUE FOR SNA2.

67. Fisheries Inshore has continually expressed the view that a management review of the TAC/TACC for SNA2 is long overdue. We recognise the difficulties with the current SNA1 stock assessment but are frustrated at the delays that are unduly impacting fishers in FMA2.

68. While lowering the deemed value for SNA2 will provide some interim relief to fishers, based on the science discussed at the Plenary we implore FNZ to consider also providing a cautious 5% increase to the TACC for SNA2 (equivalent to an increase in SNA2 South) prior to awaiting the outcomes of the work to understand the relationship between SNA2 North and SNA1 BOP.

69. Fisheries Inshore also emphasises the importance of reviewing the TAC/TACC for the whole SNA2 stock contemporaneously with the completion of the SNA1 stock assessment and related work to understand the relationship between SNA1 BOP and SNA2 North.

TRE1

FISHERIES INSHORE POSITION: SUPPORT MAINTAINING THE CURRENT DEEMED VALUE FOR TRE1.

70. We note FNZ states:
    - The TACC for TRE 1 has not been reviewed since the stock came into the QMS in 1986
    - Recent research indicates that biomass of the Bay of Plenty stock has increased since the mid-1980s and is likely to be above the management target of 40% B0.
    - The deemed value rates for TRE 1 were last reviewed in 2009

71. In the light of the above statements, the most appropriate management response would be an increase in the TAC and TACC to allow for increased utilisation.

72. Around $350,000 has been paid in deemed values for TRE1 since the deemed values were reviewed in 2009.

73. Fisheries Inshore considers the proposed increase to the deemed value is unjustified as there is a lack of evidence indicating that that the current catch is not being covered by ACE, nor is it evident that catches are exceeding the TACC and presenting a sustainability risk.

74. We also note that the deemed value rate was not decreased when port prices decreased in in 2016. The recent increase in the TRE1 port price has restored the previous differentials that existed between the port price, ACE price and deemed value rate.

WAR2

FISHERIES INSHORE POSITION: DO NOT SUPPORT ANY CHANGE TO THE DEEMED VALUE FOR WAR2.

75. FNZ is not currently proposing any changes to the deemed values for WAR2 but has requested feedback based on the view that it may need to be reviewed as a result of dropping the TACC.

76. Fisheries Inshore considers there is no justification to change the deemed value rate as there is no evidence to suggest there is a sustainability risk to the stock, and that changes to fishing effort explain the reduced catch. Consequently, it is not appropriate that the TAC/TACC is reduced below Option 2 (260t). Nor are there are any other issues that could justify an adjustment to the deemed value rate at this time.

OTHER INDUSTRY BODY MANDATED STOCKS

HOK 1, SCI 1

77. Fisheries Inshore endorses Deepwater Group's submission on these stocks.

SKI 3 and 7, BCO 7, FMA 7 Mixed Trawl fishery, GUR 3, SPO

78. Fisheries Inshore endorses Southern Inshore's submission on these stocks.

KIN 3 and 7

79. Fisheries Inshore endorses Southern Inshore Fisheries submission on the deemed value review for these stocks.

FURTHER ENGAGEMENT

80. Fisheries Inshore and our shareholders would be happy to engage in further discussions with FNZ on any matters pertaining to this submission before FNZ finalise their final advice on the sustainable management of these fisheries.

Kind regards,

Laws Lawson
Executive Chair
Fisheries Inshore New Zealand

SOUTHERN INSHORE FISHERIES
MANAGEMENT COMPANY LIMITED

Sustainability Review October 2022
Fisheries Management, Fisheries New Zealand
Email: FMsubmissions@mpi.govt.nz

22 July 2022

Review of Sustainability Measures for 1 October 2022

1. Thank you for this opportunity to comment on the review of sustainability measures for a number of fishstocks that we represent on behalf of our shareholders. This submission is made in respect of the following review of sustainability measures consultation papers for:

   - BCO7 – Discussion paper No. 2022/07
   - GUR3 – Discussion paper No. 2022/09
   - SKI3 and SKI7 – Discussion paper No. 2022/23
   - SPO3 – Discussion paper No. 2022/16
   - FMA7 mixed trawl fishery (SNA7, GUR7 & SPO7) – Discussion paper 2022/09
   - WAR8 – Discussion paper No. 2022/05

   In addition to, Discussion paper No. 2022/14 - Review of Deemed Value Rates for Selected Stocks for 2022/23 – KIN3 & 7

2. Southern Inshore Fisheries Management Co. (Southern Inshore) represents 104 inshore fishstocks throughout the Fisheries Management Areas 3,5,7 & 8. In addition to representation and advocacy for shareholders the Company also invests in annual research projects, for additional monitoring of key stocks, over and above the cost recovery process.

3. Southern Inshore is a member of Fisheries Inshore New Zealand (FINZ) which is our sector representative entity (SRE) to Seafood New Zealand (SNZ).

4. We note again that Fisheries NZ have concentrated valuable resources on reviewing stocks that have been undercaught for some time assuming there must be a sustainability issue. These proposals have not been backed up with sufficient data or characterisation of the fisheries in question. If the TACC is not set appropriately it could become a choke species in an important target fishery and cause unnecessary deemed value impacts. WAR8 for example is undercaught but that is because other factors other than sustainability concern. We request a more structured approach to the management of these undercaught stocks and for it to be inline with further discussions around the possible effects of the Fisheries Reform.

5. In the place of reviewing low knowledge stocks with undercatch we request that stocks such as Elephant fish 3&7 (ELE3&7), blue moki 3 (MOK3), leatherjacket 3 (LEA3) are prioritised for continued review. These stocks are either fully caught or being limited by the TACC and deemed value effects. We request that an enhanced management framework is developed with Southern Inshore to provide for more adaptive and reactive changes to the TACC's on an annual basis as well as better research planning and cost apportionment.

6. The contact for this submission is Carol Scott.

Blue Cod (BCO7)

7. Southern Inshore do not agree with Option 1 or Option 2 to reduce the TACC.

8. The purpose of the BCO7 consultation is to set a TAC as one was not set when the stock was introduced into the QMS, whilst a TACC was. Set a TAC by all means but not at a cost to the commercial sector.

9. Since the National Blue Cod Working Group have been active and involved in the development of the National Blue Cod Strategy, they should have been given the opportunity to discuss the options for setting the TACC and allowances and to provide recommendations for consultation. The Group has not been given an opportunity to provide anything relative to this proposal.

10. There is no justification to drop the TACC from 70 tonnes to 63 tonnes or 58 tonnes on the basis of a 10 year annual catch profile. There have been numerous factors impacting commercial catch over the last 10 years, with vessels leaving the fishery, commercial vessels having to move due to recreational vessel over their grounds, fuel prices, ER/GPR and upcoming costs for cameras etc. We also note that calculations are made on the loss of revenue over this same period. Ten years is far too long to provide an accurate average, a shorter time period of say 5 years would have been more appropriate.

11. Whilst the potting survey biomass results were accepted by the Inshore Science Working Group in May 2022, they noted uncertainty in the total mortality being likely unreliable (biased low) and consequently the target %SPR ratios would need to be recalculated.

12. The most recent results were again presented to the BCO7 Plenary on Monday 18th July 2022, post the release of the consultation document. The Plenary allows for 'fresh eyes', which means additional researchers are involved in critiquing the assessment and providing assessment and method suggestions. It was clear from the discussion there was uncertainty on the proportional biomass of males and females and how that is impacting on the natural and fishing mortality and confidence in the F%SPR (spawner biomass per recruit). It is more appropriate that further research is done on these factors that inform the overall assessment.

13. Also, the most recent results for the most recent recreational catch needs to be assessed before any proposed reductions to the TACC. This would mean that all available information is used for the assessment.

14. The TACC should remain at 70 tonnes. Set a TAC and concentrate on ensuring that the recreational sector stay within their allocation.

15. Climatic changes in the South Island may also be influencing the availability of BCO as presumed changes are also being predicted for KIN and SNA. It is unclear to what extent such temperature changes may influence the sex change that BCO experience as a protogynous fish species. MetOcean, through sea temperature monitoring, have shown that heat waves and water temperatures in the Top of the South Island are becoming more prevalent.

16. FNZ have noted they are using the previous advice to the Minister in 2003 that proposed an allowance of 27 tonnes. Given the change in the biomass in the fishery since 2003, this figure would be out of date. Regulation 50 of the Amateur Fishing Regulations 2013 do not require reporting of customary authorisations or catch details but some researchers have presumed that a lot of the recreational catch may be taken by tangata whenua fishers. We assume that given the biomass change from 2003 and lack of reporting against the customary catch that the figure of 27 tonnes may be a bit high?

17. The stock projection or prognosis as per the May Plenary proposes that the 'biomass is expected to increase under current management controls. Further reference point setting needs to be

applied as well as correcting the uncertainty as noted above. On this basis it is inappropriate to reduce the TACC at this time.

18. Reducing the TACC to current catch has the potential to cause deemed value impacts whereas allowing the TACC to be 10% higher than current catch allows for fishers to access any available ACE. As the fishery continues to build it may be necessary in time to review and increase the current TACC.

19. The next assessment for BCO7 will be in 2023, the previous was completed in 2018. This proposal should have been made in-line with information from this upcoming analysis.

Red Gurnard (GUR3)

20. Southern Inshore agree that the TACC for GUR3 has to be increased but note that the proposed increase of only 75 tonnes is well below the current catch and also below the current stock assessment analysis. The most recent (2022) ECSI trawl survey preliminary biomass estimate in the 10-400m (core plus shallow strata) is calculated at 5,463 tonnes, this is approximately 1,700 tonnes above the biomass for the same depth range from the 2021 trawl survey that was used in the stock assessment.

21. If the TACC is not set at 1700 tonnes the catch in this fishery by the end of 2023 is likely to exceed that amount and incur deemed values. We are consistently playing catch up in this fishery with TACC settings lagging behind abundance increases.

22. Southern Inshore has promoted a step-wise approach to TACC increase proposals for a number of years. These proposals have been in-line with regular analyses and monitoring by the ECSI trawl survey results.

23. We propose that reconsideration is given to the proposed TACC level and adjust it to 1650 tonnes with a further review after the next ECSI trawl survey in 2024. The setting of 1650 tonnes is in-line with the outcome of the most recent stock assessment projects, the fact that the fishery is well above the target level (HSS) and allows for minor headroom for continued access and minimising deemed value effects before the next review. In relation to the target $B_{2020\text{-}21}$ was estimated to be 64% B_0 and Very Likely (>90%) to be at or above the target, see Figure 1.

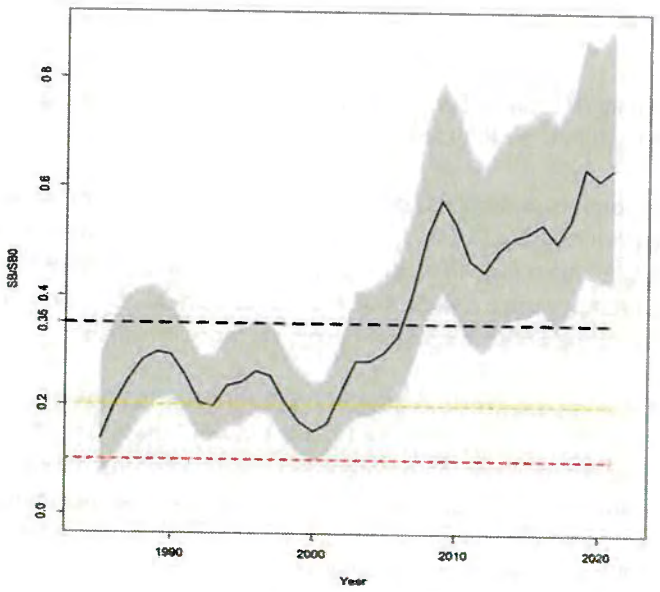


Figure 1. Annual trend in spawning biomass relative to the 35% *SB0* interim target biomass level for the base model. The line represents the median and the shaded area represents the 95% credible interval. The dashed line represents the interim target level. The red and orange dashed lines represent the hard and soft biomass limits, respectively.

24. It has been suggested that the current proposed TACC level was made because of some concern for the increased bycatch for tarakihi (TAR3). There is no evidence that this is happening. The current catch from the most recent year for GUR3 was 1,645 tonnes with the projected catch from this current year, with three months left in the fishing year, being at 90.41% caught.

25. Current catch of GUR3 is clearly showing no impact on the catch of TAR3 and projections, see Figure 2. The 2022 trawl survey preliminary biomass result for TAR3 shows an increase to the biomass and therefore we do not see an issue with the bycatch of TAR3 and supposed need to restrict the TACC increases to GUR3.

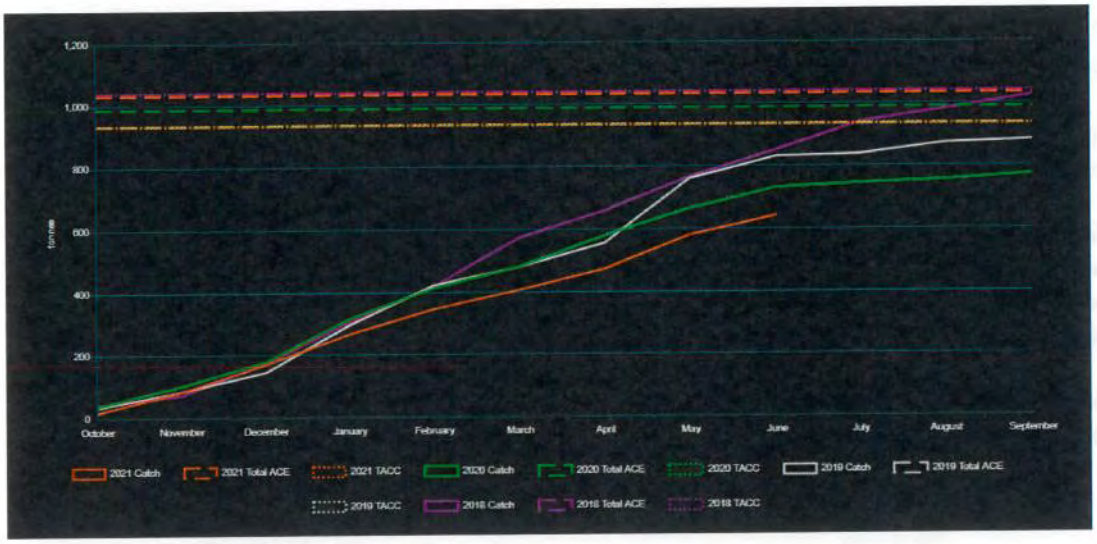


Figure 2. TACC and Commercial catch trend of TAR3 for the fishing years 2018-2021

26. There needs to be more active management for GUR3 as there continues to be a catch-up situation for changes to the TACC in relation to current catch. The continuing trend in this fishery clearly shows a positive progressive increase and the decision-making needs to take account of that to allow the reduction in deemed value effects.

27. More and more our fisheries managers are slow to react to the changes in the abundance of a number of fisheries and to make changes accordingly. Fishers should not be compelled to continue to avoid species that are in abundance and can potentially become 'choke species'.

Gemfish (SKI3 and SKI7)

28. Southern Inshore agree with Option 3 to increase the TACC's for both SKI3 and SKI7 from 839 tonnes to 1,091 tonnes.

29. Gemfish is an unavoidable bycatch species and abundance has increased significantly over the past 5-6 years unexpectedly. An increase in the TACC has not resulted in targeting of this species. The majority of catch in these fisheries are covered by fisheries observers, CPUE and supported by trawl surveys.

30. Biomass in these fisheries has increased significantly from 2015 following improved recruitment. Catches have increased and continue increasing with increased biomass over the last few years. Given recent recruitments, the stock size is likely to increase over the short term (1-3yrs).

31. Starr et al provided an extensive analysis (to the FNZ working group) of both SKI3 and SKI7 and provided ten standardised CPUE series covering the three gemfish fisheries. All series have shown

a sharp increase in CPUE beginning in 2017/18 and has verified what industry have expressed to FNZ over this time period with continued requests for TACC increases.

32. This is not a stock that features within assessments to date. Catch rates have increased quickly without warning and the end result is major deemed value payments (in excess of $1M). TACC increases thus far have been appreciated but this biomass increase was unpredicted and could fall as quickly. We need to maintain vigilance with the TACC level noting that no-one is targeting and the biomass is so variable.

33. Given the most recent assessment we request that FNZ consider Option 3 as the preferred option.

Rig (SPO3)

34. Southern Inshore agree with Option 2.

35. Rig are a target and bycatch species for the setnet and inshore mixed species trawl fisheries. They are also currently allowed to be released alive under Schedule 6 for trawl but not for setnet.

36. We agree with the modest adjustment to the TACC by 33 tonnes as it is inline with our request made to FNZ. Our commitment remains to request step-wise increases to this fishstock as they can be vulnerable and management action can be taken quickly off the back of updated CPUE and trawl surveys.

37. We believe that SPO3 is in a strong position and it has remained above the target reference limit for a number of years now, with an increasing trend. See Figure 3

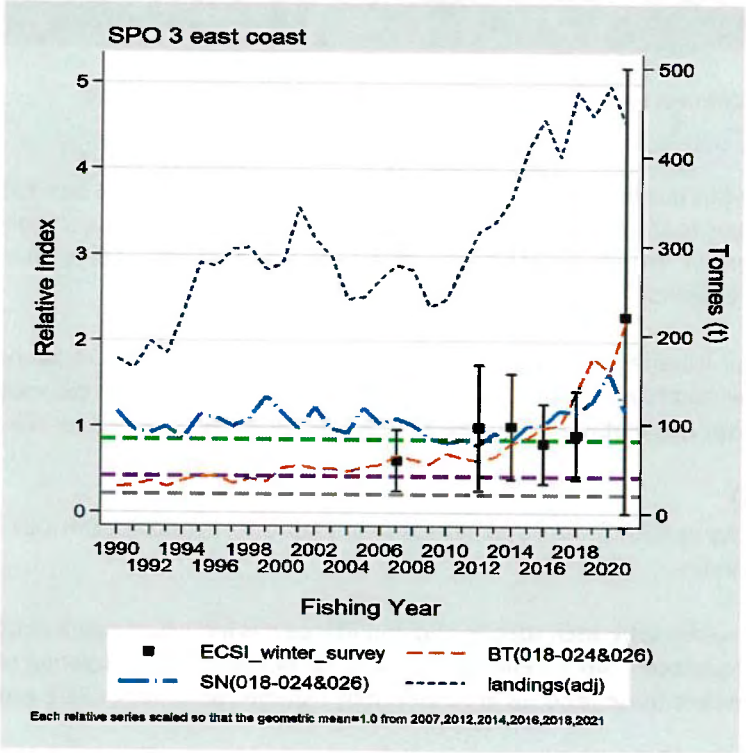


Figure 3. Comparison of the East Coast South Island (ECSI) trawl survey (all strata) with two accepted east coast CPUE indices [BT(018-024&026) and SN(018-024&026)] and with the adjusted QMR/MHR landings for SPO 3. Adjustments were made to ensure that all catch values in every year are based on a common conversion factor. The *BMSY* proxy (geometric average: 2007, 2012, 2014, 2016, 2018 ECSI total 10-400 m survey biomass estimates) is shown as a green line, and the calculated Soft Limit (= 0.5 X *BMSY* proxy) is shown as a purple line and the calculated Hard Limit (= 0.25 X *BMSY* proxy) is shown as a grey line.

38. The SPO3 bottom trawl series showed an increasing trend from 1989-90 to 2016-17, after which the trend accelerated, more than doubling the relative CPUE between 2018 and 2021. The SPO3 setnet series fluctuated without trend over the same period. The SPO3 bottom trawl Foveaux Strait series showed a slow increasing trend from 1989-90 to 2013-14, after which the trend accelerated, doubling the relative CPUE between 2015 and 2021. The SPO3 setnet Foveaux Strait series showed a slowly increasing trend over the same period. See Figure 4.

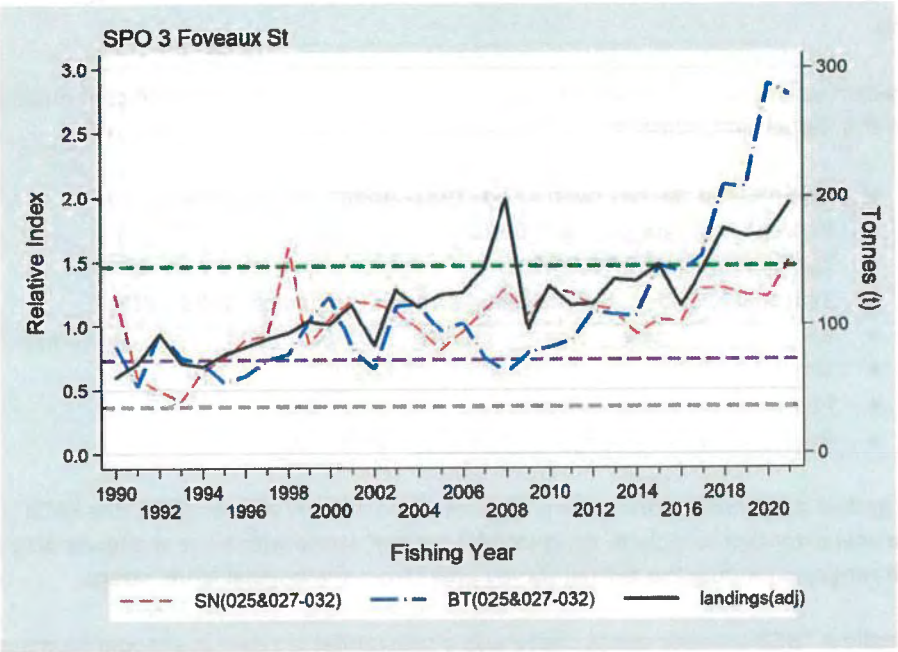


Figure 4. Comparison of two accepted Foveaux Strait CPUE indices [BT(025&027–032) and SN(025&027–032)] with the adjusted QMR/MHR landings for SPO 3 Foveaux St. Adjustments were made to ensure that all catch values in every year are based on a common conversion factor. The agreed *BMSY* proxy of 1.33 x 30% *B0* proxy [=geometric average from 2002 to 2012 for the SN(025&027–032 series) is shown as a green line, and the calculated Soft Limit (= 0.67 X 30% *B0* proxy) is shown as a purple line and the calculated Hard Limit (=0.33 X 30% *B0* proxy) is shown as a grey line.

39. Whilst anecdotal, and not evidence-based, there must however be some influence on SPO3 abundance by the protection measures provided by the 2008 Hector dolphin closures to setnet. In addition to this, inshore trawlers have a voluntary agreement not to trawl inside the 1Nm area from Timaru to Banks Peninsula. Whilst this closure is to preserve elephantfish egg cases it also adds another layer of protection from inshore trawl effort on ELE3.

40. As with a number of inshore fisheries around the South Island, fishers should not be required to avoid species where abundance can provide additional utilisation and minimise deemed value impacts.

41. The assessment for SPO3 clearly shows that an increase in the TACC by 33 tonnes to 693 tonnes will not unduly impact on the current abundance in this important fishery.

FMA7 MIXED TRAWL FISHERY – SNA7, GUR7 and SPO7

42. We agree that there are interdependencies between certain stocks but these do not necessarily have to remain prescriptive to those identified at present. The mitigation of capture of some stocks may be influenced by the adoption of selectivity measures, seasonality and changes to migration patterns due to environmental influences. These changes should not exclude the review of other stocks in the mixed trawl fishery where it is evident that abundance may be increasing as well.

Snapper (SNA7)

43. Southern Inshore agree with Option 2.

44. The snapper rebuild has been very positive and increases to the TACC have been backed up with science-based evidence from regular assessment updates. Whilst the main fishery was concentrated in Tasman Bay prior to the mid-2010s there is evidence now from the stock assessment for an increase in the spatial domain of the stock, particularly the older fish, with the distribution extending into deeper areas beyond TBGB and southward along the west coast of the South Island.

45. The most recent stock assessment was conducted in 2021 and included a significant number of data sets in the model that included:

- Commercial catches by method, 1931-2020;
- Recreational catches, 1931-2020;
- Tag biomass estimate 1987;
- Seasonal (Oct-Dec, Jan-Apr) single trawl CPUE indices 1989-2019;
- Kaharoa trawl survey biomass indices (1991-2020) and length/age compositions;
- Single trawl catch age compositions 1992-2019;
- Pair trawl catch age compositions 1974-1983; and
- Recreational catch length compositions 2005-2019.

46. In order to gather additional information within the main nursery area in TBGB, the WCSI trawl survey area was extended to include designated 'snapper' strata within the shallower area (10-20m) depth range, extending the overall survey areas from the original 'core' strata.

47. From the shallow TBGB snapper strata, there was a substantial increase in snapper biomass from the three recent surveys (2017,2019 and 2021).

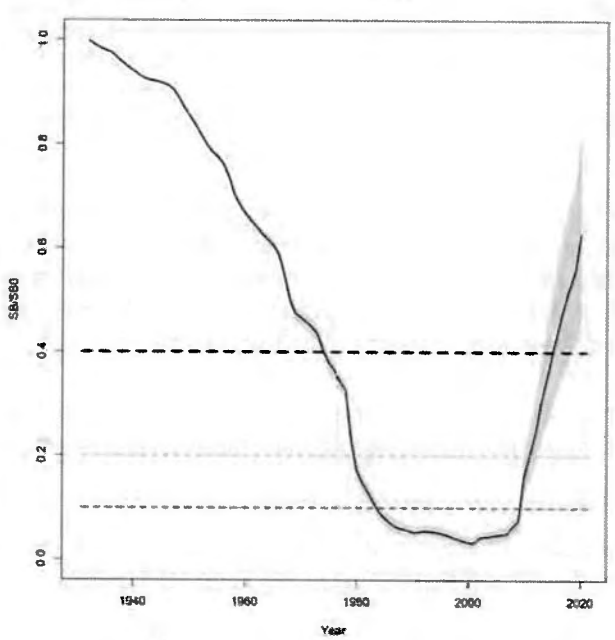


Figure 5. Annual trend in spawning biomass relative to the 40% *SB0* interim target biomass level for the base model. The line represents the median and the shaded area represents the 95% credible interval. The black dashed line represents the interim target level. The red and orange dashed lines represent the hard and soft limits, respectively.

48. Figure 5 represents the annual trend in spawning biomass and clearly shows the continuation of the increasing trajectory. Projections were conducted for the 5-year period following the terminal

year of the model (2021-2025). The projections are strongly influenced by the high estimates of recent recruitment of the 2017 and 2018 year classes, resulting in an increase in total biomass during the projection period. Whilst there was concern about the strength of these year classes because they have not yet appeared in the commercial fishery, this may be because fishers have adopted larger codend mesh sizes from 100mm to 150mm to assist with selectivity of smaller size classes of snapper and other fishstocks.

49. It has been suggested that an increase in the TACC would cause an increase in targeted SNA catch and increased effort in the TBGB region. This has been reviewed and shown not to be the case. In fact, the number of vessels that fish TBGB have reduced by two-thirds. We have less boats covering much more area and avoiding SNA7 is practically impossible. Additionally, the fishers have reduced their headline heights to avoid the capture of snapper specifically. This small increase will allow them to change their trawl selectivity to catch more snapper where they have availability of ACE, and as SNA7 is coupled within the GUR7 and SPO7 catch complex allows for increased utilisation opportunities in a fishery that has increasing biomass across multiple species.

50. Given the increased data and confidence that supports the SNA7 biomass is increasing we see no reason why the TACC should not be increased by 100 tonnes as proposed.

Red Gurnard 7 (GUR7)

51. Southern Inshore agree with Option 2.

52. Gurnard are taken as bycatch in the mixed trawl fishery and found throughout the full range of QMA7 along with snapper, rig, John dory, tarakihi and flatfish.

53. The first fully quantitative stock assessment of GUR7 was conducted in 2022; previous assessments were partial quantitative assessments based on the WCSI trawl survey series. The input data used commercial catches (1987-2021) and Kaharoa WCSI trawl survey biomass indices and length/age compositions (1992-2021).

54. The trawl survey indices increased considerably from 2009 to 2021. The model estimates that the increase in abundance was due to a considerably higher level of recruitment from 2008 onwards.

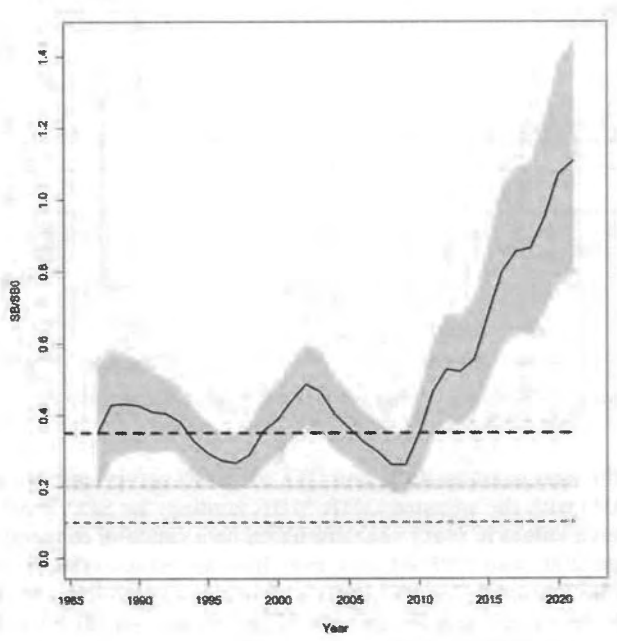


Figure 6. Annual trend in spawning biomass relative to the 35% *SB0* interim target biomass level for the base model. The line represents the median and the shaded area represents the 95% credible interval. The dashed line represents the interim target level. The red and orange dashed lines represent the hard and soft biomass limits, respectively.

55. Figure 6 represents the annual trend in spawning biomass and clearly shows the increasing trend in GUR7 well above the target level.

56. An increase in the TACC for GUR7 will allow fishers to utilise the increasing abundance but we do not see it causing any additional effects on associated bycatch of other fish species to any great degree. Overcatch of GUR7 has been happening in a number of years.

57. Southern Inshore have adopted a step-wise approach to requests for TACC increases. The proposed increase is in-line with that approach.

Rig (SPO7)

58. Southern Inshore agree with Option 2.

59. SPO7 stock status has been assessed on standardised CPUE analyses of the set net and bottom trawl fisheries since the early 2000s. More recently, stock status for SPO7 has been evaluated against target definitions based on the WCSI independent trawl survey.

60. Over recent years the setnet fishery on the WCSI has declined due to set net closures for Hector dolphins and the shift of ACE to bottom trawl vessels because of increasing bycatch in the mixed trawl fishery. Further set net closures in the TBGB region will also have an impact. More recently, only one vessel has targeted SPO7 in 038 and it is likely that this series will be abandoned from the analyses.

61. The bottom trawl series showed an increasing trend since the mid-2000s, with low points observed in both 2004-05 and 2006-07, but has since shown a generally increasing trend which has accelerated in 2019-20 and 2020-21 to three and four times the long-term average index.

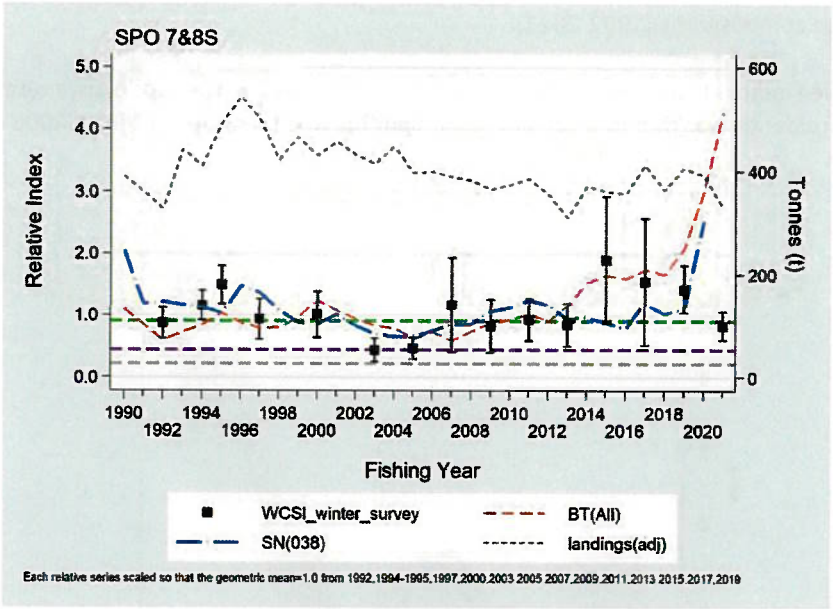


Figure 7. Comparison of the west coast South Island (WCSI) trawl survey and two accepted CPUE indices BT(All) and SN(038) with the adjusted QMR/MHR landings for SPO 7. Adjustments were made to ensure that all catch values in every year are based on a common conversion factor. The agreed Soft Limit (average: 2003 and 2005 WCSI survey biomass estimates=0.49) is shown as a purple line, and the calculated *BMSY* proxy (=2×Soft Limit) is shown as a green line and the calculated Hard Limit (=0.5×Soft Limit) is shown as a grey line. The 2021 index value for the SN(038) analysis was dropped because it was based on a single vessel.

62. Whilst the most recent WCSI trawl survey in 2021 showed a decline for SPO7 this is contrary to

the increasing trends in setnet CPUE from 2015 and bottom trawl CPUE from 2012. The trawl survey is believed to provide reliable indices of the relative biomass of males and younger females and therefore does not fully sample SPO7. The three previous surveys were well above the target reference line.

63. The survey area does not represent the full extent of the range of SPO7 and even though it is a time-series over an extensive time period it will not represent the spatial movement of rig which are known to move distances from tagging experiments, but it will also not show the abundance of larger rig in deeper water.

64. The commercial bottom trawl footprint is generally maintained over the same spatial area year on year with a large extent of the EEZ not fished. With the movement of a number of species possibly due to environmental conditions it may be possible that rig move in and out of the survey area depending on those conditions and therefore influencing survey vessel catch and be contrary to CPUE.

65. Schedule 6 provides some flexibility for return of SPO7 to the sea for bottom trawl but it is not available to setnet vessels. If the TACCs are set appropriately, fishers should not be required to use such mechanisms where utilisation opportunities are evident.

66. From observations by fishers, we believe the rig fishery is strong. As with other stocks we approach the proposals for TACC increases on a step-wise approach. We believe this approach and the closure of Farewell Spit to protect pupping females has helped this fishery to recover. This closure was proposed by fishers in 2007 and still stands today.

67. Fishers should be given the opportunity to continue to take advantage of increased abundance in fisheries and given the options in mixed trawl fisheries to not have 'choke' species cause economic impacts through deemed value accrual.

68. We request that the TACC for SPO7 be increased to the proposed amount under Option 2, and that further reviews are made on a regular basis.

Blue warehou (WAR8)

69. Southern Inshore agree with Option 1 the modified Status Quo.

70. We do not believe in reviewing TACCs merely on the basis of taking out headroom because a stock has not been fully caught. There are a number of factors that have influenced the low catch in this fishery and further characterisation should be done before reductions are proposed.

71. Option 1 provides for the setting of a TAC whilst maintaining the current TACC which we agree should be the case. Any review of the TACC needs to be fully characterised and not just include biological observations, there are more factors at play in this fishery. WAR8 is a low knowledge stock with no estimate of biomass or yield but FNZ need to develop a framework to review such stocks with confidence.

72. Impacts from fishing restrictions put in place under the Hector's and Maui dolphin Threat Management Plan (TMP) are evident as well as the further costs imposed on fishers for ER/GPR and cameras and increasing fuel costs are all having an effect.

73. The most recent decision on SNA8 did not provide the increased availability of ACE to local fishers to allow them to reduce the need for avoidance of snapper. Such avoidance continues to impact on the potential catch of species such as WAR8. Fishers have gone to deeper water to the extent of the 12Nm zone to avoid snapper but also to continue to fish for warehou.

74. It is uncertain to what extent warehou may be present beyond the 12Nm zone but current fuel prices restrict fishing beyond normal areas. Vessels did work to the outer extent of the EEZ targeting BNS but given the reduction in the TACC for BNS this restricted fishing on those outer features. It is not inconceivable that WAR8 could be found in the outer area of QMA8 but effort is non-existent to provide that data at this time.

75. No definite stock boundaries are known but after considering know spawning grounds and seasonal fishing patterns suggests there may be four stocks, with spawning occurring off New Plymouth in winter/spring. The seasonal pattern of landings suggests that there is a coastal migration of blue warehou. There is a winter/spring fishery for blue warehou at New Plymouth and north Wairarapa, a summer fishery with a small autumn peak at Wellington and summer/autumn fishery along the east coast South Island. These seasonal changes and coastal migration will be influencing the availability of WAR8 given the rise of climatic changes of late. These factors could explain the cyclical nature of the catches, see Figure 8.

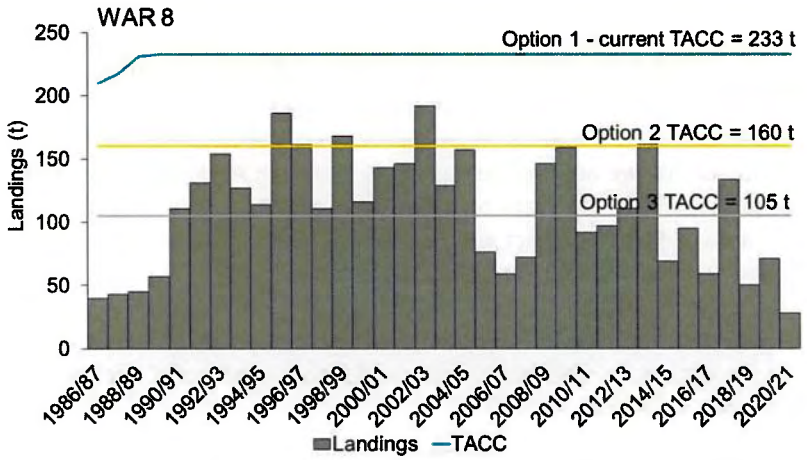


Figure 8. Annual commercial landings (in tonnes) of blue warehou in WAR 8 from 1986/87 to 2020/21 with the current TACC of 233 tonnes indicated by the blue line, the TACC for Option 2 indicated by the yellow line and the TACC for Option 3 indicated by the grey line.

76. The increased fishing restrictions for dolphins and recent minimal increase to the SNA8 TACC has caused issues with availability of SNA8 ACE when fishing for WAR8. Fishers have had to look to how to make changes to their fishing gear, especially with trawl gear to continue to minimise the snapper catch. Similarly, they are looking how to transition across from trawl gear to longline gear to avoid snapper but still target important stocks in QMA8 such as WAR8. Reducing the TACC of WAR8 at this stage would be premature until fishes have been given time to adopt methods that can provide for positive economic returns.

77. We agree that a TAC for WAR8 should be set but with no decrease to the TACC. Option 1 is acceptable until further information is gathered and characterised for this fishery.

Deemed Value Rates for Selected Stocks

78. In the absence of incorrectly set TACC's a more meaningful deemed value system is essential. We recognise that the creation of an independently Deemed Value Working Group has seen significant improvement in how we may set deemed values noting that the philosophical starting point is to provide the incentive to land. This group is in its infancy and Industry need to become more aware of the DV setting process but it is clear the discussion is much more positive. Providing a system that encourages the landing and recording of all fish and using this information to guide us in making better management decisions is an essential management tool that has been a long time coming.

79. Notwithstanding, we again would like to propose to work with FNZ to review the deemed value

regime and include the development of a schedule of regional deemed values. It needs to recognise that industry is not looking for 'something for nothing' here. We want to participate in a very important process that sees Industry and FNZ develop a far more workable environment.

80. Also, within this approach, is the recognition that the differential deemed value regime that is meant to promote obtaining ACE, is problematic when companies within this industry choose not to release it. Philosophically, no deemed value should be paid on a stock where the TACC has not been caught. All of these matters need to be discussed and we certainly welcome the opportunity.

Kingfish (KIN3)

81. We agree that the deemed value rate for KIN3 needs to be decreased and agree that as there is no sustainability concern the proposed differential deemed value rate of $5/kg for all catch that is more than double ACE holding (>200%) takes into account the ability for fishers to release live kingfish.

82. The range expansion of KIN3 is still causing problems with bycatch in the trawl and setnet fisheries, and the fact that kingfish are not able to be released from setnet under Schedule 6 is causing additional issues and economic burden for those fishers.

83. With such a low TACC and increasing abundance the KIN3 TACC needs to be increased even further than proposed because of the range expansion.

84. We support the reduction in the deemed value but implore FNZ to consider increasing the TACC.

Kingfish (KIN7)

85. We agree that the deemed value rate for KIN7 needs to be decreased and agree that as there is no sustainability concern the proposed differential deemed value rate of $5/kg for all catch that is more than double ACE holding (>200%) takes into account the ability for fishers to release live kingfish.

86. Not dissimilar to the issues in KIN3, the TACC for KIN7 and KIN8 needs to be set at a level that will not incur undue deemed value payments. The delayed timing of the vessels moving from the WCSI hoki fishery to the South Taranaki JMA7 fishery did cause an undercatch in KIN7 last year but this should not deter an increase in the TACC being made this year.

87. Both Southern Inshore and the Deepwater Group have collaborated in the tagging of kingfish in both the hoki and Jack mackerel fisheries for the past couple of years. Tag returns have shown the movement of kingfish from the Taranaki Bight to the Bay of Plenty. The tag data has been entered into the FNZ gamefish database and tagging is continuing.

88. We support the reduction in the deemed value but implore FNZ to consider increasing the TACC.

TAMA

ASSET HOLDING COMPANY

22 July 2022

Fisheries New Zealand
Fisheries Management Team
By email: fmsubmissions@mpi.govt.nz

Review of Sustainability Measures for October 2022 Fishing Year

Tēnā koe,

Tama Asset Holding Company Limited is fully committed to the sustainable management of its fisheries and ensuring their protection and continued productivity for future Tama Asset Holding Company Limited generations to come.

Tama Asset Holding Company Limited fully supports Te Ohu Kaimoana's submission regarding the sustainability measures for the October 2022 fishing year. Those fish stocks relevant to the Tama Asset Holding Company Limited and its position with respect to each is set out below.

HOK1

Fisheries NZ (*FNZ*) options:

Option	TAC	TACC	Non-regulatory catch split arrangement		Allowances		
			Western stock limit	Eastern stock limit	Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	111,140	110,000	45,000	65,000	20	20	1,100
Option 2	106,090 ↓ (5,050)	105,000 ↓ (5,000)	40,000 ↓ (5,000)	65,000	20	20	1,050 ↓ (50)

Tama Asset Holding Company Limited supports **Option 1** – the Status Quo with industry continuing its management measures as determined by the Deep Water Group (*DWG*). Tama Asset Holding Company Limited supports the DWG initiatives for the HOK1 fishery.

SCI1

FNZ options:

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	139	132	0	0	7
Option 2	153 ↑ (14 t)	145 ↑ (13 t)	0	0	8 ↑ (1 t)
Option 3	166 ↑ (27 t)	158 ↑ (26 t)	0	0	8 ↑ (1 t)

Tama Asset Holding Company Limited supports **Option 2** – 14mt TAC increase with a 13mt increase to the TACC and a 1mt increase to other mortalities allowance.

SKI7

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
	Option 1 *(Status quo)*	848	839	1	0	8
SKI 7	**Option 2**	1,018 ↑ (170 t)	1,007 ↑ (168 t)	1	0	10↑ (2 t)
	Option 3	1,103 ↑ (255 t)	1,091 ↑ (252 t)	1	0	11 ↑ (3 t)

Tama Asset Holding Company Limited supports **Option 2** – 170mt increase to the TAC with a168 increase to the TACC and a 2mt increase to other mortalities allowance.

SSK8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
	1 *(status quo)*	23	20	1	1	1
SSK 8	**2**	49 ↑ (26 t)	43 ↑ (23 t)	1	1	4 ↑ (3 t)
	3	60 ↑ (37 t)	53 ↑ (33 t)	1	1	5 ↑ (4 t)

Tama Asset Holding Company Limited supports **Option 2** – 26mt increase to the TAC with a 23mt increase to the TACC and a 3mt increase to other mortalities allowance.

SNA7

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
SNA 7	Option 1 *(Status quo)*	645	350	20	250	25
	Option 2	743 ↑ (102 t)	450 ↑ (100 t)	20	250	23 ↓ (2 t)

Tama Asset Holding Company Limited supports **Option 2** – 102mt increase to the TAC with a 100mt increase to the TACC and a 2mt increase to other mortalities allowance.

GUR7

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
GUR 7	Option 1 *(Status quo)*	1,422	1,298	17	42	65
	Option 2	1,582 ↑ (160 t)	1,450 ↑ (152 t)	17	42	73 ↑ (8 t)

Tama Asset Holding Company Limited supports **Option 2** – 160mt increase to the TAC with a 152mt increase to the TACC and an 8mt increase to other mortalities allowance.

SPO7

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
SPO 7	Option 1 *(Status quo)*	373	298	15	33	27
	Option 2	371 ↓ (2 t)	315 ↑ (17 t)	15	25 ↓ (8 t)	16 ↓ (11 t)

Tama Asset Holding Company Limited supports **Option 2** – 2mt decrease to the TAC with a 17mt increase to the TACC, an 8mt decrease to the recreational allowance and an 11mt increase to other mortalities allowance.

BCO7

28N rights are present for BCO7 which will ben enacted when TACC is subsequently increased. This would have the effect of appropriating iwi settlement quota.

FNZ options:

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Current settings	-	70.005	-	-	-
Option 1	169	63 ↓ (7.005 t)	27	64	15
Option 2	157	58 ↓ (12.005 t)	27	58	14

Tama Asset Holding Company Limited does not support a decrease but instead supports an industry shelve of 12mt of ACE each year (same catch reduction as Option 3 but not by way of TACC reduction). 28N rights are present for BCO7 which will be enacted when TACC is subsequently increased. This would have the effect of appropriating iwi settlement quota. This critical fisheries settlement issue needs to be resolved.

Nāku noa, nā,

WAARI GEOFFREY WARD-HOLMES

Director

Tama Asset Holding Company Limited

Fisheries New Zealand
Tini a Tangaroa

Submission Form

Review of sustainability measures for 1 October 2022

Once you have completed this form

Email to: FMsubmissions@mpi.govt.nz

While we prefer email, you can also post your submission to:

2022 Sustainability Review, Fisheries Management, Fisheries New Zealand, PO Box 2526, Wellington 6140, New Zealand.

Submissions must be received no later than 5pm on Friday 22 July 2022.

Anyone may make a submission, either as an individual or on behalf of an organisation. Please ensure all sections of this form are completed. You may either use this form or prepare your own but if preparing your own please use the same headings as used in this form.

Submitter details:

Name of submitter or contact person: Will Macdonald	
Organisation (if applicable):	Rangitāne Holdings Limited
Email:	
Fishstock(s) this submission refers to:	HOK1, SCI1, SKI7, SSK8, SNA7, GUR7, SPO7, BCO7
Your preferred option as detailed in the discussion paper (write "other" if you do not agree with any of the options presented):	Rangitāne Holdings Limited support reductions in TACC where applicable, else, we support Status Quo TACC.

Official Information Act 1982

Note, that your submission is public information. Submissions may be the subject of requests for information under the Official Information Act 1982 (OIA). The OIA specifies that information is to be made available to requesters unless there are sufficient grounds for withholding it, as set out in the OIA. Submitters may wish to indicate grounds for withholding specific information contained in their submission, such as the information is commercially sensitive or they wish personal information to be withheld. Any decision to withhold information requested under the OIA is reviewable by the Ombudsman.

Fish Stock	RHL Position
HOK1 – Hoki	RHL support option 2 – a 4.5% TACC decrease (from western stocks) and no change to customary or recreational allowances.
SCI1 – Scampi	RHL support option 1 – status quo with TACC at 132mt.
SKI7 – Gemfish	RHL support option 1 – status quo with TACC at 839mt.
SSK8 - Skate	RHL support option 1 – status quo with TACC at 20mt.
SNA7 - Snapper	RHL support option 1 – status quo with TACC at 350mt.
GUR7 - Gurnard	RHL support option 1 – status quo with TACC at 1,298mt.
SPO7 - Rig	RHL support option 1 – status quo with TACC at 298mt.
BCO7 – Blue Cod	RHL support option 3 – a 17% TACC decrease and no change to customary or recreational allowances.

Ngati Mutunga O Wharekauri Asset Holding Co Ltd

Chatham Islands

Tel: 03 3050 500

Email:

Inshore Fisheries Management
Ministry for Primary Industries
PO Box 2526
Wellington 6140

22 July 2022

REVIEW OF SUSTAINABLITY MEASURES OCTOBER 2022 FISHING YEAR

By email: FMSubmissions@mpi.govt.nz

Tēnā koe,

Ngāti Mutunga o Wharekauri Asset Holding Company Ltd (*NMOWAHC*) is the fully owned subsidiary of Ngāti Mutunga o Wharekauri iwi Trust. The NMOWIT and NMOWAHC are fully committed to the sustainable management of its fisheries and ensuring their protection and continued productivity for future NMOW and Wharekauri generations to come. This is paramount to NMOW's and the Island's own sustainability and economic viability.

Those fish stocks relevant to the NMOWAHC and its position with respect to each is set out in the table below.

Hoki (HOK1)

Fisheries NZ (*FNZ*) proposed options:

Option	TAC	TACC	Non-regulatory catch split arrangement		Allowances		
			Western stock limit	Eastern stock limit	Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	111,140	110,000	45,000	65,000	20	20	1,100
Option 2	106,090 ↓ (5,050)	105,000 ↓ (5,000)	40,000 ↓ (5,000)	65,000	20	20	1,050 ↓ (50)

NMOWAHC supports **Option 1** – Status Quo with industry continuing its management measures as determined by the Deep Water Group (*DWG*). NMOWAHC is a member of, and supports, the DWG initiatives for the HOK1 fishery.

Scampi (SCI1)

FNZ proposed options:

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	139	132	0	0	7
Option 2	153 ↑ (14 t)	145 ↑ (13 t)	0	0	8 ↑ (1 t)
Option 3	166 ↑ (27 t)	158 ↑ (26 t)	0	0	8 ↑ (1 t)

NMOWAHC supports **Option 2** – 14mt TAC increase with a 13mt increase to the TACC and a 1mt increase to other mortalities allowance.

Gemfish (SKI3)

FNZ proposed options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
SKI 3	Option 1 *(Status quo)*	848	839	1	0	8
	Option 2	1,018 ↑ (170 t)	1,007 ↑ (168 t)	1	0	10↑ (2 t)
	Option 3	1,103 ↑ (255 t)	1,091 ↑ (252 t)	1	0	11 ↑ (3 t)

NMOWAHC supports **Option 2** – 170mt increase to the TAC with a 168mt increase to the TACC and a 2mt increase to other mortalities allowance.

Smooth Skate (SSK8)

FNZ proposed options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
RSK 8	1 *(status quo)*	24	21	1	1	1
	2	43 ↑ (19 t)	37 ↑ (16 t)	1	1	4 ↑ (3 t)
SSK 8	1 *(status quo)*	23	20	1	1	1
	2	49 ↑ (26 t)	43 ↑ (23 t)	1	1	4 ↑ (3 t)
	3	60 ↑ (37 t)	53 ↑ (33 t)	1	1	5 ↑ (4 t)

NMOWAHC supports **Option 2** – 26mt increase to the TAC with a 23mt increase to the TACC and a 3mt increase to other mortalities allowance.

Gurnard (GUR3)

FNZ proposed options:

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	1614	1500	3	6	105
Option 2	1695 ↑ (81 t)	1575 ↑ (75 t)	3	6	111 ↑ (6 t)

NMOWAHC supports **Option 2** – 81mt increase to the TAC with a 75mt increase to the TACC and a 6mt increase to other mortalities allowance.

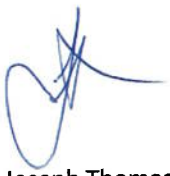
Bladder kelp KBB4G)

FNZ proposed options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
KBB 3G	1 *(Status quo)*	1238	1236.8	0.1	0.1	1
	2 (50% decrease)	619.6 ↓ (618.4 t)	618.4 ↓ (618.4 t)	0.1	0.1	1
	3 (75% decrease)	310.4 ↓ (927.6 t)	309.2 ↓ (927.6 t)	0.1	0.1	1
KBB 4G	1 *(Status quo)*	274	272.8	0.1	0.1	1
	2 (75% decrease)	69.4 ↓ (204.6 t)	68.2 ↓ (204.6 t)	0.1	0.1	1

NMOWAHC is a party to, and fully supports and endorses, the "Submission on the Review of Sustainability Measures for Attached Bladder Kelp (KBB4G) for 2022/23" prepared by Bill Chisholm on behalf of 100% of the KBB4G quota owners. This submission supports **Option 1**.

Ngā mihi nui



Joseph Thomas
Chair
Ngati Mutunga o Wharekauri Asset Holding Company Limited

TE KOROWAI O
NGĀRUAHINE
TRUST

22 July 2022

Fisheries New Zealand
Fisheries Management Team
By email: fmsubmissions@mpi.govt.nz

Review of Sustainability Measures for October 2022 Fishing Year

Tēnā koe,

Ngaruahine Fisheries Limited is fully committed to the sustainable management of its fisheries and ensuring their protection and continued productivity for future Ngaruahine Fisheries Limited generations to come.

Ngaruahine Fisheries Limited fully supports Te Ohu Kaimoana's submission regarding the sustainability measures for the October 2022 fishing year. Those fish stocks relevant to the Ngaruahine Fisheries Limited and its position with respect to each is set out below.

HOK1

Fisheries NZ (*FNZ*) options:

Option	TAC	TACC	Non-regulatory catch split arrangement		Allowances		
			Western stock limit	Eastern stock limit	Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	111,140	110,000	45,000	65,000	20	20	1,100
Option 2	106,090 ↓ (5,050)	105,000 ↓ (5,000)	40,000 ↓ (5,000)	65,000	20	20	1,050 ↓ (50)

Ngaruahine Fisheries Limited supports **Option 1** – the Status Quo with industry continuing its management measures as determined by the Deep Water Group (*DWG*). Ngaruahine Fisheries Limited supports the DWG initiatives for the HOK1 fishery.

SCI1

147 High Street, Te Hāwera, 4610

PO Box 474, Te Hāwera, Taranaki 4640

06 278 7411

www.ngaruahine.iwi.nz

FNZ options:

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	139	132	0	0	7
Option 2	153 ↑ (14 t)	145 ↑ (13 t)	0	0	8 ↑ (1 t)
Option 3	166 ↑ (27 t)	158 ↑ (26 t)	0	0	8 ↑ (1 t)

Ngaruahine Fisheries Limited supports **Option 2** – 14mt TAC increase with a 13mt increase to the TACC and a 1mt increase to other mortalities allowance.

SKI7

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
SKI 7	**Option 1** *(Status quo)*	848	839	1	0	8
	Option 2	1,018 ↑ (170 t)	1,007 ↑ (168 t)	1	0	10↑ (2 t)
	Option 3	1,103 ↑ (255 t)	1,091 ↑ (252 t)	1	0	11 ↑ (3 t)

Ngaruahine Fisheries Limited supports **Option 2** – 170mt increase to the TAC with a 168mt increase to the TACC and a 2mt increase to other mortalities allowance.

RSK8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
RSK 8	1 *(status quo)*	24	21	1	1	1
	2	43 ↑ (19 t)	37 ↑ (16 t)	1	1	4 ↑ (3 t)

147 High Street, Te Hāwera, 4610

PO Box 474, Te Hāwera, Taranaki 4640

06 278 7411

www.ngaruahine.iwi.nz

Ngaruahine Fisheries Limited supports **Option 2** – 19mt increase to the TAC with a 16mt increase to the TACC and a 3mt increase to other mortalities allowance.

TE KOROWAI O NGĀRUAHINE TRUST

SSK8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
SSK 8	1 *(status quo)*	23	20	1	1	1
	2	49 ↑ (26 t)	43 ↑ (23 t)	1	1	4 ↑ (3 t)
	3	60 ↑ (37 t)	53 ↑ (33 t)	1	1	5 ↑ (4 t)

Ngaruahine Fisheries Limited supports **Option 2** – 26mt increase to the TAC with a 23mt increase to the TACC and a 3mt increase to other mortalities allowance.

WAR8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
WAR 8	Current settings	-	232.8	-	-	-
	Option 1 *(modified Status quo)*	250.8	232.8	2	4	12
	Option 2	174	160 ↓ (72.8 t)	2	4	8
	Option 3	117	105 ↓ (127.8 t)	2	4	6

Ngaruahine Fisheries Limited supports **Option 2** – 72.8mt decrease to the TACC.

Nāku noa, nā,

Investment Manager
Ngaruahine Fisheries Limited

147 High Street, Te Hāwera, 4610

PO Box 474, Te Hāwera, Taranaki 4640

06 278 7411

www.ngaruahine.iwi.nz

22 July 2022

Fisheries New Zealand
Fisheries Management Team
By email: fmsubmissions@mpi.govt.nz

Review of Sustainability Measures for October 2022 Fishing Year

Tēnā koe,

Te Atiawa (Taranaki) Holdings Limited is fully committed to the sustainable management of its fisheries and ensuring their protection and continued productivity for future Te Atiawa (Taranaki) Holdings Limited generations to come.

Te Atiawa (Taranaki) Holdings Limited fully supports Te Ohu Kaimoana's submission regarding the sustainability measures for the October 2022 fishing year. Those fish stocks relevant to the Te Atiawa (Taranaki) Holdings Limited and its position with respect to each is set out below.

HOK1

Fisheries NZ (*FNZ*) options:

Option	TAC	TACC	Non-regulatory catch split arrangement		Allowances		
			Western stock limit	Eastern stock limit	Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	111,140	110,000	45,000	65,000	20	20	1,100
Option 2	106,090 ↓ (5,050)	105,000 ↓ (5,000)	40,000 ↓ (5,000)	65,000	20	20	1,050 ↓ (50)

Te Atiawa (Taranaki) Holdings Limited supports **Option 1** – the Status Quo with industry continuing its management measures as determined by the Deep Water Group (*DWG*). Te Atiawa (Taranaki) Holdings Limited supports the DWG initiatives for the HOK1 fishery.

SCI1

FNZ options:

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	139	132	0	0	7
Option 2	153 ↑ (14 t)	145 ↑ (13 t)	0	0	8 ↑ (1 t)
Option 3	166 ↑ (27 t)	158 ↑ (26 t)	0	0	8 ↑ (1 t)

Te Atiawa (Taranaki) Holdings Limited supports **Option 2** – 14mt TAC increase with a 13mt increase to the TACC and a 1mt increase to other mortalities allowance.

SKI7

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
SKI 7	Option 1 *(Status quo)*	848	839	1	0	8
	Option 2	1,018 ↑ (170 t)	1,007 ↑ (168 t)	1	0	10↑ (2 t)
	Option 3	1,103 ↑ (255 t)	1,091 ↑ (252 t)	1	0	11 ↑ (3 t)

Te Atiawa (Taranaki) Holdings Limited supports **Option 2** – 170mt increase to the TAC with a 168mt increase to the TACC and a 2mt increase to other mortalities allowance.

RSK8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
RSK 8	1 *(status quo)*	24	21	1	1	1
	2	43 ↑ (19 t)	37 ↑ (16 t)	1	1	4 ↑ (3 t)

Te Atiawa (Taranaki) Holdings Limited supports **Option 2** – 19mt increase to the TAC with a 16mt increase to the TACC and a 3mt increase to other mortalities allowance.

SSK8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing

SSK 8	1 *(status quo)*	23	20	1	1	1
	2	49 ↑ (26 t)	43 ↑ (23 t)	1	1	4 ↑ (3 t)
	3	60 ↑ (37 t)	53 ↑ (33 t)	1	1	5 ↑ (4 t)

Te Atiawa (Taranaki) Holdings Limited supports **Option 2** – 26mt increase to the TAC with a 23mt increase to the TACC and a 3mt increase to other mortalities allowance.

WAR8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
WAR 8	Current settings	-	232.8	-	-	-
	Option 1 *(modified Status quo)*	250.8	232.8	2	4	12
	Option 2	174	160 ↓ (72.8 t)	2	4	8
	Option 3	117	105 ↓ (127.8 t)	2	4	6

Te Atiawa (Taranaki) Holdings Limited supports **Option 2** – 72.8mt decrease to the TACC.

Nāku noa, nā,

Investment Manager
Te Atiawa (Taranaki) Holdings Limited

WHANGANUI
Iwi Fisheries Limited

22 July2022

Fisheries New Zealand
Fisheries Management Team
By email: fmsubmissions@mpi.govt.nz

Review of Sustainability Measures for October 2022 Fishing Year

Tēnā koe,

Whanganui Iwi Fisheries Limited is fully committed to the sustainable management of its fisheries and ensuring their protection and continued productivity for future Whanganui Iwi Fisheries Limited generations to come.

Whanganui Iwi Fisheries Limited fully supports Te Ohu Kaimoana's submission regarding the sustainability measures for the October 2022 fishing year. Those fish stocks relevant to the Whanganui Iwi Fisheries Limited and its position with respect to each is set out below.

HOK1

Fisheries NZ (*FNZ*) options:

Option	TAC	TACC	Non-regulatory catch split arrangement		Allowances		
			Western stock limit	Eastern stock limit	Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	111,140	110,000	45,000	65,000	20	20	1,100
Option 2	106,090 ↓ (5,050)	105,000 ↓ (5,000)	40,000 ↓ (5,000)	65,000	20	20	1,050 ↓ (50)

Whanganui Iwi Fisheries Limited supports **Option 1** – the Status Quo with industry continuing its management measures as determined by the Deep Water Group (*DWG*). Whanganui Iwi Fisheries Limited supports the DWG initiatives for the HOK1 fishery.

SCI1

FNZ options:

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	139	132	0	0	7
Option 2	153 ↑ (14 t)	145 ↑ (13 t)	0	0	8 ↑ (1 t)
Option 3	166 ↑ (27 t)	158 ↑ (26 t)	0	0	8 ↑ (1 t)

Whanganui Iwi Fisheries Limited supports **Option 2** – 14mt TAC increase with a 13mt increase to the TACC and a 1mt increase to other mortalities allowance.

SKI7

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
SKI 7	**Option 1** *(Status quo)*	848	839	1	0	8
	Option 2	1,018 ↑ (170 t)	1,007 ↑ (168 t)	1	0	10 ↑ (2 t)
	Option 3	1,103 ↑ (255 t)	1,091 ↑ (252 t)	1	0	11 ↑ (3 t)

Whanganui Iwi Fisheries Limited supports **Option 2** – 170mt increase to the TAC with a 168mt increase to the TACC and a 2mt increase to other mortalities allowance.

RSK8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
RSK 8	1 *(status quo)*	24	21	1	1	1
	2	43 ↑ (19 t)	37 ↑ (16 t)	1	1	4 ↑ (3 t)

Whanganui Iwi Fisheries Limited supports **Option 2** – 19mt increase to the TAC with a 16mt increase to the TACC and a 3mt increase to other mortalities allowance.

SSK8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
SSK 8	1 *(status quo)*	23	20	1	1	1
	2	49 ↑ (26 t)	43 ↑ (23 t)	1	1	4 ↑ (3 t)
	3	60 ↑ (37 t)	53 ↑ (33 t)	1	1	5 ↑ (4 t)

Whanganui Iwi Fisheries Limited supports **Option 2** – 26mt increase to the TAC with a 23mt increase to the TACC and a 3mt increase to other mortalities allowance.

WAR8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
WAR 8	Current settings	-	232.8	-	-	-
	Option 1 *(modified Status quo)*	250.8	232.8	2	4	12
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	Option 3	117	105 ↓ (127.8 t)	2	4	6

Whanganui Iwi Fisheries Limited supports **Option 2** – 72.8mt decrease to the TACC.

Nāku noa, nā,

Simon Karipa
Chair, Whanganui Iwi Fisheries Limited

Te Paataka o Tangaroa Ltd
A Subsidiary Company of Te Kaahui o Rauru
14 Fookes Street • PO Box 18 Waverley 4510 • +64 6 346 5707

22 July 2022

Fisheries New Zealand
Fisheries Management Team
By email: fmsubmissions@mpi.govt.nz

Review of Sustainability Measures for October 2022 Fishing Year

Teenaa koe,

Te Pataka o Tangaroa Limited is fully committed to the sustainable management of its fisheries and ensuring their protection and continued productivity for future Te Pataka o Tangaroa Limited generations to come.

Te Pataka o Tangaroa Limited fully supports Te Ohu Kaimoana's submission regarding the sustainability measures for the October 2022 fishing year. Those fish stocks relevant to the Te Pataka o Tangaroa Limited and its position with respect to each is set out below.

HOK1

Fisheries NZ (*FNZ*) options:

Option	TAC	TACC	Non-regulatory catch split arrangement		Allowances		
			Western stock limit	Eastern stock limit	Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	111,140	110,000	45,000	65,000	20	20	1,100
Option 2	106,090 ↓ (5,050)	105,000 ↓ (5,000)	40,000 ↓ (5,000)	65,000	20	20	1,050 ↓ (50)

Te Pataka o Tangaroa Limited supports **Option 1** – the Status Quo with industry continuing its management measures as determined by the Deep Water Group (*DWG*). Te Pataka o Tangaroa Limited supports the DWG initiatives for the HOK1 fishery.

SCI1

FNZ options:

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	139	132	0	0	7
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Option 3	166 ↑ (27 t)	158 ↑ (26 t)	0	0	8 ↑ (1 t)

Te Pataka o Tangaroa Limited supports **Option 2** – 14mt TAC increase with a 13mt increase to the TACC and a 1mt increase to other mortalities allowance.

SKI7

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
	Option 1 *(Status quo)*	848	839	1	0	8
SKI 7	**Option 2**	1,018 ↑ (170 t)	1,007 ↑ (168 t)	1	0	10↑ (2 t)
	Option 3	1,103 ↑ (255 t)	1,091 ↑ (252 t)	1	0	11 ↑ (3 t)

Te Pataka o Tangaroa Limited supports **Option 2** – 170mt increase to the TAC with a 168mt increase to the TACC and a 2mt increase to other mortalities allowance.

RSK8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
RSK 8	1 *(status quo)*	24	21	1	1	1
	2	43 ↑ (19 t)	37 ↑ (16 t)	1	1	4 ↑ (3 t)

Te Pataka o Tangaroa Limited supports **Option 2** – 19mt increase to the TAC with a 16mt increase to the TACC and a 3mt increase to other mortalities allowance.

SSK8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
	1 *(status quo)*	23	20	1	1	1
SSK 8	2	49 ↑ (26 t)	43 ↑ (23 t)	1	1	4 ↑ (3 t)
	3	60 ↑ (37 t)	53 ↑ (33 t)	1	1	5 ↑ (4 t)

Te Pataka o Tangaroa Limited supports **Option 2** – 26mt increase to the TAC with a 23mt increase to the TACC and a 3mt increase to other mortalities allowance.

WAR8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
WAR 8	**Current settings**	-	232.8	-	-	-
	Option 1 *(modified Status quo)*	250.8	232.8	2	4	12
	Option 2	174	160 ↓ (72.8 t)	2	4	8
	Option 3	117	105 ↓ (127.8 t)	2	4	6

Te Pataka o Tangaroa Limited supports **Option 2** – 72.8mt decrease to the TACC.

Naaku noa, naa,

Victor Goldsmith

Group Chief Executive Officer

Te Kaahui o Rauru Group - Te Pataka o Tangaroa Limited

TE RŪNANGA O NGĀTI MUTUNGA

22 July 2022

Fisheries New Zealand

Fisheries Management Team

By email: fmsubmissions@mpi.govt.nz

Review of Sustainability Measures for October 2022 Fishing Year

Tēnā koe,

Maruehi Fisheries Limited is fully committed to the sustainable management of its fisheries and ensuring their protection and continued productivity for future Maruehi Fisheries Limited generations to come.

Maruehi Fisheries Limited fully supports Te Ohu Kaimoana's submission regarding the sustainability measures for the October 2022 fishing year. Those fish stocks relevant to the Maruehi Fisheries Limited and its position with respect to each is set out below.

HOK1

Fisheries NZ (FNZ) options:

Option	TAC	TACC	Non-regulatory catch split arrangement		Allowances		
			Western stock limit	Eastern stock limit	Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	111,140	110,000	45,000	65,000	20	20	1,100
Option 2	106,090 ↓ (5,050)	105,000 ↓ (5,000)	40,000 ↓ (5,000)	65,000	20	20	1,050 ↓ (50)

Maruehi Fisheries Limited supports **Option 1** – the Status Quo with industry continuing its management measures as determined by the Deep Water Group (DWG). Maruehi Fisheries Limited supports the DWG initiatives for the HOK1 fishery.

SCI1

FNZ options:

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	139	132	0	0	7
Option 2	153 ↑ (14 t)	145 ↑ (13 t)	0	0	8 ↑ (1 t)
Option 3	166 ↑ (27 t)	158 ↑ (26 t)	0	0	8 ↑ (1 t)

Maruehi Fisheries Limited supports **Option 2** – 14mt TAC increase with a 13mt increase to the TACC and a 1mt increase to other mortalities allowance.

SKI7

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
SKI 7	Option 1 *(Status quo)*	848	839	1	0	8
	Option 2	1,018 ↑ (170 t)	1,007 ↑ (168 t)	1	0	10 ↑ (2 t)
	Option 3	1,103 ↑ (255 t)	1,091 ↑ (252 t)	1	0	11 ↑ (3 t)

Maruehi Fisheries Limited supports **Option 2** – 170mt increase to the TAC with a 168mt increase to the TACC and a 2mt increase to other mortalities allowance.

RSK8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
RSK 8	1 *(status quo)*	24	21	1	1	1
	2	43 ↑ (19 t)	37 ↑ (16 t)	1	1	4 ↑ (3 t)

Maruehi Fisheries Limited supports **Option 2** – 19mt increase to the TAC with a 16mt increase to the TACC and a 3mt increase to other mortalities allowance.

SSK8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing

SSK 8	1 *(status quo)*	23	20	1	1	1
	2	49 ↑ (26 t)	43 ↑ (23 t)	1	1	4 ↑ (3 t)
	3	60 ↑ (37 t)	53 ↑ (33 t)	1	1	5 ↑ (4 t)

Maruehi Fisheries Limited supports **Option 2** – 26mt increase to the TAC with a 23mt increase to the TACC and a 3mt increase to other mortalities allowance.

WAR8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
WAR 8	Current settings	-	232.8	-	-	-
	Option 1 *(modified Status quo)*	250.8	232.8	2	4	12
	Option 2	174	160 ↓ (72.8 t)	2	4	8
	Option 3	117	105 ↓ (127.8 t)	2	4	6

Maruehi Fisheries Limited supports **Option 2** – 72.8mt decrease to the TACC.

Nāku ra,

Mitchell Ritai

Pouwhakahaere (CEO)

Maruehi Fisheries Limited

22 July 2022

Fisheries New Zealand
Fisheries Management Team
By email: fmsubmissions@mpi.govt.nz

Review of Sustainability Measures for October 2022 Fishing Year

Tēnā koe,

Taranaki Iwi Fisheries Limited is fully committed to the sustainable management of its fisheries and ensuring their protection and continued productivity for future Taranaki Iwi Fisheries Limited generations to come.

Taranaki Iwi Fisheries Limited fully supports Te Ohu Kaimoana's submission regarding the sustainability measures for the October 2022 fishing year. Those fish stocks relevant to the Taranaki Iwi Fisheries Limited and its position with respect to each is set out below.

HOK1

Fisheries NZ (*FNZ*) options:

Option	TAC	TACC	Non-regulatory catch split arrangement		Allowances		
			Western stock limit	Eastern stock limit	Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	111,140	110,000	45,000	65,000	20	20	1,100
Option 2	106,090 ↓ (5,050)	105,000 ↓ (5,000)	40,000 ↓ (5,000)	65,000	20	20	1,050 ↓ (50)

Taranaki Iwi Fisheries Limited supports **Option 1** – the Status Quo with industry continuing its management measures as determined by the Deep Water Group (*DWG*). Taranaki Iwi Fisheries Limited supports the DWG initiatives for the HOK1 fishery.

SCI1

FNZ options:

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	139	132	0	0	7
Option 2	153 ↑ (14 t)	145 ↑ (13 t)	0	0	8 ↑ (1 t)
Option 3	166 ↑ (27 t)	158 ↑ (26 t)	0	0	8 ↑ (1 t)

Taranaki Iwi Fisheries Limited supports **Option 2** – 14mt TAC increase with a 13mt increase to the TACC and a 1mt increase to other mortalities allowance.

SKI7

FNZ options:

Stock	Option	TAC	TACC	Allowances		
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SKI 7	**Option 1** *(Status quo)*	848	839	1	0	8
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Taranaki Iwi Fisheries Limited supports **Option 2** – 170mt increase to the TAC with a 168mt increase to the TACC and a 2mt increase to other mortalities allowance.

RSK8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
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RSK 8	1 *(status quo)*	24	21	1	1	1
	2	43 ↑ (19 t)	37 ↑ (16 t)	1	1	4 ↑ (3 t)

Taranaki Iwi Fisheries Limited supports **Option 2** – 19mt increase to the TAC with a 16mt increase to the TACC and a 3mt increase to other mortalities allowance.

SSK8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
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	1 *(status quo)*	23	20	1	1	1
SSK 8	2	49 ↑ (26 t)	43 ↑ (23 t)	1	1	4 ↑ (3 t)
	3	60 ↑ (37 t)	53 ↑ (33 t)	1	1	5 ↑ (4 t)

Taranaki Iwi Fisheries Limited supports **Option 2** – 26mt increase to the TAC with a 23mt increase to the TACC and a 3mt increase to other mortalities allowance.

WAR8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
WAR 8	Current settings	-	232.8	-	-	-
	Option 1 *(modified Status quo)*	250.8	232.8	2	4	12
	Option 2	174	160 ↓ (72.8 t)	2	4	8
	Option 3	117	105 ↓ (127.8 t)	2	4	6

Taranaki Iwi Fisheries Limited supports **Option 2** – 72.8mt decrease to the TACC.

Nāku noa, nā,

Alexander McKinnon
Investment Manager
Taranaki Iwi Fisheries Limited

22 July 2022

2022 Sustainability Review
Fisheries Management
Fisheries New Zealand
PO Box 2526
Wellington 6140

BY EMAIL: FMSubmissions@mpi.govt.nz

Sealord Group Limited Submission in relation to the Review of sustainability measures for selected fish stocks – October 2022 round

Introduction

1. Sealord Group Limited (**Sealord**) welcomes the opportunity to provide comments on the Fisheries New Zealand (**FNZ**) discussion papers for *Review of sustainability measures for selected fish stocks – October 2022 round* (**Discussion Papers**). Sealord supports effective science-based management to ensure ongoing sustainability and utilisation of fisheries resources.

2. Sealord is one of New Zealand's leading seafood companies. Established in 1961, a 50% interest in Sealord was acquired by Māori in 1992, which is currently held by Moana New Zealand (Aotearoa Fisheries Limited) for the benefit of all Māori. The other half of Sealord is owned by Japanese company Nippon Suisan Kaisha, Ltd (Nissui).

3. Today Sealord employs more than 1,200 people in New Zealand and overseas, with over NZD 900 million of assets and annual revenues of approximately NZD 450 million. Sealord has interests in fishing both in New Zealand and internationally. Domestically, the majority of Sealord's quota holdings are in deep water fisheries. Sealord also holds interests in inshore quota.

4. Sealord operates exclusively in middle-depth and deepwater trawl fisheries, hence we have limited to our feedback to the questions in the Discussion Papers which relate these fisheries (HOK1 and SKI3&7)

5. Sealord has reviewed, and supports, the submissions in relation to the Discussion Papers made by each of Deepwater Group, Southern Inshore Fisheries Management Company and Te Ohu Kaimoana.

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SEALORD

Feedback on Discussion papers

Hoki (HOK1)

7. Sealord supports option 1 in the Discussion Paper No: 2022/11 which contemplates no change to the HOK1 TACC.

8. In summary, Sealord submits:
    - The current TACC is set at a level for biomass growth. Industry initiatives including catch shelving are working to increase the rate of growth with increased catch rates starting to be seen on the West.
    - A simple 5,000 tonne reduction in HOK1W (as proposed by option 2) is limited in impact on long term sustainability, particularly when the HOK1W TACC was already reduced in 2021 for the FY22 catch year.
    - The proposed (by option 2) reduction of catch from the West Coast spawn fishery is not based on the best available science or information. It would also create a perverse outcome of forcing more catch to be taken from the Western juvenile population on the Chatham Rise.
    - It is not clear the basis on which unilateral changes (i.e. without quota holder agreement) could be made to the non-regulatory catch split arrangement, which would be the effect of option 2, given that the split has been agreed (as noted in paragraph 13 of the Discussion Paper) between Fisheries New Zealand and quota holders.
    - The practical effect of a nominal 5,000 tonne TACC change would be to reduce quota owners' ability to make effective and timely management decisions.

9. Hoki quota owners have been managing the annual catch of hoki since 2018 at levels lower than those recommended by FNZ and lower than the TACC. At the end of the 2017-18 fishing year, it became apparent to fishers that the hoki model was not representing actual biomass. Using careful shelving arrangements, based on fisher reports and independently funded science, a biomass crash was avoided. The shelving arrangements involved:
    - 2018/19 – shelved 20,000t of HOK1W in year along with any carry forward from 1W.
    - 2020/21 20,000t - shelved in (10 from each of 1W & 1E).
    - This year– 10,000t from 1E shelved to help rebuild 1W.

10. The hoki model is much improved following the rebuild last year and then further adjustments being made for the current stock assessment. The rebuilt model appears to fit fishery observations, independent surveys and new work on hoki CPUE.

11. Preliminary modelling outputs[1] indicate that as a single biological stock HOK1 spawning biomass is estimated at 0.913 million tonnes (45%B_0) and is rapidly increasing under the current catch level managed by industry. A recent genomic study found no genetic differences between the various hoki fisheries around New Zealand (though they are genetically different from the Tasmanian hoki (blue grenadier) population).

[1]NIWA MPD modelling, Deepwater Stock Assessment Working Group, March 2022 (pers. comms.)

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12. Under a two-stock paradigm the eastern hoki fishery is, from a biomass level, above the management target range and the western fishery has turned a corner and is beginning to increase. In all these models it is apparent that the last five years have characterised the longest period of relative biomass stability in the history of the New Zealand hoki fishery.

13. The five-year projection is based on catching the current TACC of 110 thousand tonnes. Hoki quota owners have been managing the annual catch well below this volume for some time. Annual catch for the next few years is unlikely to exceed 105,000 tonnes and it is unnecessary to reduce the TACC to this level.

14. As well as the industry agreed ACE shelving, the following measures are also in place, the combined effect of which is to maintain annual catch below TACC while targeting fishing at the least vulnerable parts of the population:
    - Hoki management areas prohibiting fishing where juvenile hoki are known to be in high abundance.
    - Move-on rules across the entire fishery to further avoid juvenile hoki. It should be noted that protecting juvenile western recruits on the Chatham Rise is a far sharper tool than the blunt application of catch reduction in the growing West Coast spawn fishery.
    - Spawn area closures as a precaution against a stock-recruit relationship on spawning success

15. The recent improvements in hoki population characterisation and modelling have highlighted the role of variable recruitment on the rate of biomass change. There is also alignment with historical events and mistakes of past management:
    - In the late 90s the fishery had a major collapse due to seven years of low recruitment. A similar period of average recruitment saw the fishery bounce back to above the management range.
    - The Tasmanian blue grenadier (hoki) fishery has rebuilt to 120% unfished biomass due to 8 years of above average recruitment.
    - In the recent years, due to a long period of below average recruitment repeated reductions in catch limit has not led to biomass growth in the western population – but the industry-led management actions have prevented further decline.

16. Sealord supports the precautionary approach of informing management decisions with projections based on recent recruitment (2009-18). Sealord submits that this will ensure that potential long-term change to recruitment is accounted for. The 'recent' period has a very low average year class strength (YCS), and modelling based on the longer-term average leads to significantly different estimates of B_0 and current biomass. However, two corollaries of basing management decisions on an arbitrarily selected representative period are:
    a. The ten-year period of 'recent' recruitment is well below the average – it is essentially a sensitivity wherein biomass growth is modelled in the worst case. Using 15 years gives a higher value for average YCS. It is statistically unlikely that the next five years recruitment would be as low as the period of 'recent' recruitment (figure1).
    b. Modelling biomass growth using low YCS naturally projects a low rate of biomass growth. Sealord respectfully submits that it is a misapplication of management advice from these models to attempt to prop up the 2027 biomass prediction by tinkering with the TACC.

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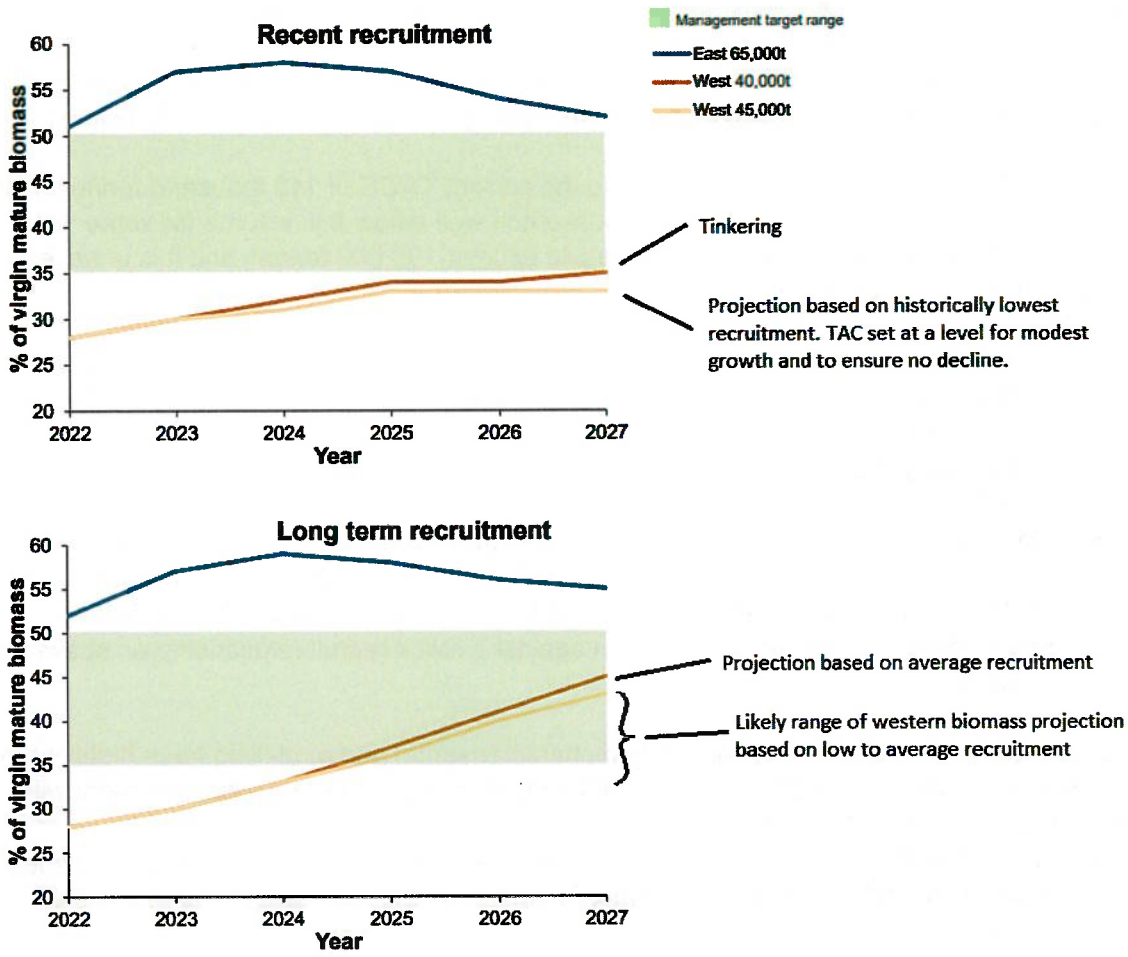

Figure 1: Annotated figure of five-year projection based on low recruitment (top) and average recruitment (bottom). Highlights the strong effect of different recruitment settings versus negligible effect of spawn fishery catch reduction. From FNZ Discussion Paper figure 3.

17. Hoki, as a tier one species, is assessed every year. Because of the industry measures already in place, the relatively small TACC reduction proposed in option 2 will have no effect on total HOK1 catch for 2022/23. Error bars were not included in the biomass projection figures in the Discussion Paper but the figure in the 2022 plenary document suggests that the proposed reduction does not make a statistically significant difference.

Gemfish – SKI 3 & 7

18. Sealord supports option 3 set out in the Discussion Paper No. 2022/13.

19. Sealord experience in the fishery aligns with the findings of the 2022 stock assessment. The abundance of gemfish bycatch in our affected fisheries does not appear to be decreasing.

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20. CPUE based modelling for this (previously) low information stock appears to accurately characterise the fishery. Sealord supports annual monitoring for adaptive fishery management of these stocks.

21. Sealord supports the statement in the Discussion Paper that, as a bycatch only species, changes to the SKI TACC will have no effect on catch or effort.

Yours faithfully

SEALORD GROUP LTD

Doug Paulin

Chief Executive Officer

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Ngātiwai Trust Board

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22 July 2022

Fisheries New Zealand
Fisheries Management Team
By email: fmsubmissions@mpi.govt.nz

Review of Sustainability Measures for October 2022-23 Fishing Year

Tēnā koe,

Ngātiwai Holdings Limited (*NHL*) is a fully owned subsidiary of Ngātiwai Trust Board. The Ngātiwai group is fully committed to the sustainable management of its fisheries and ensuring their protection and continued productivity for future Ngātiwai generations to come.

Those fish stocks being reviewed by Fisheries NZ ahead of the October 2022 fishing year that are relevant to NHL, together with NHL's position with respect to each, is set out in the sections below.

Hoki (HOK1)

Fisheries NZ (*FNZ*) proposed options:

Option	TAC	TACC	Non-regulatory catch split arrangement		Allowances		
			Western stock limit	Eastern stock limit	Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	111,140	110,000	45,000	65,000	20	20	1,100
Option 2	106,090 ↓ (5,050)	105,000 ↓ (5,000)	40,000 ↓ (5,000)	65,000	20	20	1,050 ↓ (50)

NHL supports **Option 2** – 5,050mt decrease to the TAC with a 5,000mt decrease to the TACC and a 50mt decrease to other mortalities allowance.

Scampi (SCI1)

FNZ proposed options:

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	139	132	0	0	7
Option 2	153 ↑ (14 t)	145 ↑ (13 t)	0	0	8 ↑ (1 t)
Option 3	166 ↑ (27 t)	158 ↑ (26 t)	0	0	8 ↑ (1 t)

NHL supports **Option 1** – the Status Quo with no change to the TAC, TACC or other allowances.

Smooth Skate (SSK8)

FNZ proposed options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
	1 *(status quo)*	23	20	1	1	1
SSK 8	**2**	49 ↑ (26 t)	43 ↑ (23 t)	1	1	4 ↑ (3 t)
	3	60 ↑ (37 t)	53 ↑ (33 t)	1	1	5 ↑ (4 t)

NHL supports supports **Option 2** – 26mt increase to the TAC with a 23mt increase to the TACC and a 3mt increase to other mortalities allowance.

Nāku noa, nā,

For Ngātiwai Holdings Limited

22 July 2022

Fisheries New Zealand
Fisheries Management Team
By email: fmsubmissions@mpi.govt.nz

Review of Sustainability Measures for October 2022 Fishing Year

Tēnā koe,

Raukawa Asset Holding Company Limited is fully committed to the sustainable management of its fisheries and ensuring their protection and continued productivity for future Raukawa Asset Holding Company Limited generations to come.

Raukawa Asset Holding Company Limited fully supports Te Ohu Kaimoana's submission regarding the sustainability measures for the October 2022 fishing year. Those fish stocks relevant to the Raukawa Asset Holding Company Limited and its position with respect to each is set out below.

HOK1

Fisheries NZ (*FNZ*) options:

Option	TAC	TACC	Non-regulatory catch split arrangement		Allowances		
			Western stock limit	Eastern stock limit	Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	111,140	110,000	45,000	65,000	20	20	1,100
Option 2	106,090 ↓ (5,050)	105,000 ↓ (5,000)	40,000 ↓ (5,000)	65,000	20	20	1,050 ↓ (50)

Raukawa Asset Holding Company Limited supports **Option 1** – the Status Quo with industry continuing its management measures as determined by the Deep Water Group (*DWG*). Raukawa Asset Holding Company Limited supports the DWG initiatives for the HOK1 fishery.

SCI1

FNZ options:

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	All other mortality caused by fishing
Option 1 *(Status quo)*	139	132	0	0	7
Option 2	153 ↑ (14 t)	145 ↑ (13 t)	0	0	8 ↑ (1 t)
Option 3	166 ↑ (27 t)	158 ↑ (26 t)	0	0	8 ↑ (1 t)

Raukawa Asset Holding Company Limited supports **Option 2** – 14mt TAC increase with a 13mt increase to the TACC and a 1mt increase to other mortalities allowance.

SSK8

FNZ options:

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	All other mortality caused by fishing
SSK 8	1 *(status quo)*	23	20	1	1	1
	2	49 ↑ (26 t)	43 ↑ (23 t)	1	1	4 ↑ (3 t)
	3	60 ↑ (37 t)	53 ↑ (33 t)	1	1	5 ↑ (4 t)

Raukawa Asset Holding Company Limited supports **Option 2** – 26mt increase to the TAC with a 23mt increase to the TACC and a 3mt increase to other mortalities allowance.

Nāku noa, nā,

Alexander McKinnon
Investment Manager
Raukawa Asset Holding Company Limited