

Public Submissions Received for the 2022 April Sustainability Round

Part 1 of 4: Large representative bodies and organisations.

Part 2 of 4: Rock lobster and scallop stocks

Part 3 of 4: Scallop stocks only

Part 4 of 4: Hapuku/bass and multi stocks

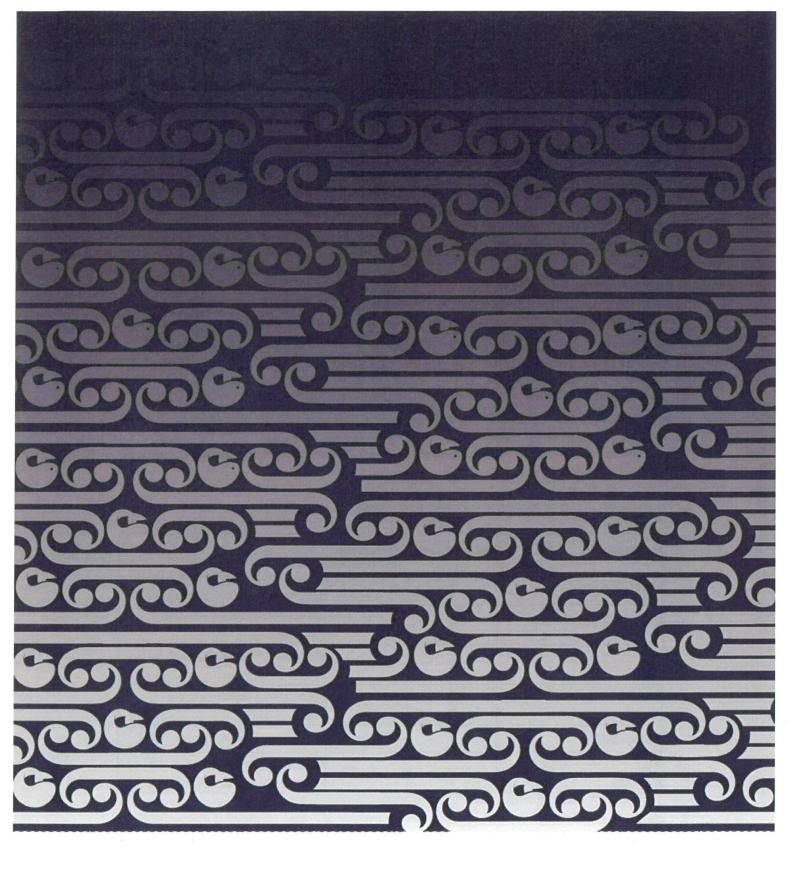
February 2022

New Zealand Government

List of Submissions & Responses for the 2022 April sustainability round

large representative bodies	Stocks				
Te Ohu Kaimoana	CRA 1, 7 & 8, SCA 1 & CS, HPB 7 & 8, RBT 7, SBW 6B				
Tama Asset Holding Company	CRA 1, 7 & 8, SCA 1 & CS, HPB 7 & 8, RBT 7, SBW 6B				
Whanganui Iwi Fisheries Ltd	CRA 1, 7 & 8, SCA 1 & CS, HPB 7 & 8, RBT 7, SBW 6B				
Taranaki lwi Fisheries Ltd	CRA 1, 7 & 8, SCA 1 & CS, HPB 7 & 8, RBT 7, SBW 6B				
Maruehi Fisheries Ltd	CRA 1, 7 & 8, SCA 1 & CS, HPB 7 & 8, RBT 7, SBW 6B				
Te Atiawa (Taranaki) Holdings Limited	CRA 1, 7 & 8, SCA 1 & CS, HPB 7 & 8, RBT 7, SBW 6B				
LegaSea, NZSFC, NZACA and NZUA	CRA 1, 7 & 8, SCA 1 & CS, HPB 7 & 8				
Fisheries Inshore New Zealand	SCA 1 & CS, HPB 7 & 8, RBT 7, SBW 6B				
Iwi Collective Partnership	CRA 1, SCA 1 & CS, HPB 7 & 8, RBT 7, SBW 6B				
Forest and Bird Protection Society of New Zealand Inc	CRA 1, SCA 1 & CS, RBT 7, SBW 6B				
SPCA	HPB 7 & 8, RBT 7, SBW 6B				
University of Auckland	CRA 1, SCA 1 & CS				
Ngatiwai Trust Board	CRA 1, SCA 1 & CS				
Southern inshore Fisheries Mgnt Company	HPB 7 & 8, RBT 7				
Deepwater Group	SBW 6B				
Sealord Group	RBT 7, SBW 6B				
Environment and Conservation Organisations of NZ (ECO)	CRA 1, 7 & 8				
Environmental Defence Society	SCA 1 & CS				

Part 1 of 2: Large representative bodies and organisations



Te Ohu Kaimoana's Response to the Review of Sustainability Measures for the 1 April 2022/23 fishing year



Our preferred approach to the review of the sustainability measures

- This document provides Te Ohu Kaimoana's response to the review of the sustainability measures for the fishing year beginning on 1 April 2022. For a full overview of Te Ohu Kaimoana's policy approach in relation to fisheries management settings please refer to "Te Ohu Kaimoana's Response to the Review of Sustainability Measures for 1 October 2021"¹.
- 2. Our role in this review process arises from our responsibility to protect the rights and interests of lwi/Māori under Te Tiriti o Waitangi and the Fisheries Deed of Settlement in a manner consistent with Te Hā o Tangaroa kia ora ai tāua. Te Hā o Tangaroa kia ora ai tāua translates to the 'breath of Tangaroa sustains us'. It expresses the unique and lasting connection Māori have with the environment. It contains the principles we use to analyse and develop modern fisheries policy.
- 3. We see a general improvement in the quality of documents supporting the review of sustainability measures. The consideration of habitats of particular significance to fisheries management and the associated deemed value settings sets the scene for a more holistic approach to fisheries management. This better recognises the interconnected nature of our fisheries management settings and represents progress beyond a historical reliance on TAC/TACC settings.

Fish stock	FNZ's Proposal	Our Position	
Kōura (CRA1)	↓	-	We support FNZ working with Iwi to determine an appropriate response
Kõura (CRA7 and CRA8)	1	↑	We support an increase to the TAC- Option 2
Tipa (SCA1 and SCA CS)	\downarrow	-	We support FNZ working with Iwi to determine an appropriate response
Hāpuka & moeone (HPB7 and 8)	\downarrow	Ļ	We support a decrease to the TACC- Option 2
Redbait (RBT7)	\downarrow	\downarrow	We support a decrease to the TAC
Southern blue whiting (SBW6B)	↓	-	We support the status quo in the absence of a risk to sustainability

4. A summary table of Te Ohu Kaimoana's positions is set out below.

5. We do not intend for our response to conflict with or override any response provided independently by Iwi through their Mandated Iwi Organisations (MIOs) or Asset Holding Companies (AHCs).

¹ <u>https://teohu.maori.nz/wp-content/uploads/2021/08/Te-Ohu-Kaimoana-Response-to-the-Review-of-Sustainability-</u> <u>Measures-for-1-October-2021.pdf</u>

We are Te Ohu Kaimoana

- 6. Te Tiriti o Waitangi (Te Tiriti) guaranteed Māori tino rangatiratanga over our taonga, including fisheries. Tino rangatiratanga is about Māori acting with authority and independence over our affairs. It is practiced by living according to tikanga and mātauranga Māori and striving to ensure that the land and resources (including fisheries) are protected for future generations. This view endures today and is embodied within our framework Te Hā o Tangaroa kia ora ai tāua (the breath of Tangaroa sustains us).
- 7. The obligations under Te Tiriti and the Māori Fisheries Deed of Settlement (the Fisheries Deed of Settlement) apply to the Crown whether there is an explicit reference to Te Tiriti in any governing statute, in this case, the Fisheries Act 1996 (the Fisheries Act). These obligations are also confirmed in the Public Service Act 2020, section 14 (1) "the role of the public service includes supporting the Crown in its relationships with Māori under the Treaty of Waitangi".
- 8. Te Ohu Kai Moana Trustee Ltd (Te Ohu Kaimoana) was established to protect and enhance Te Tiriti and the Fisheries Deed of Settlement. The Fisheries Deed of Settlement and the Māori Fisheries Act 2004 (the Māori Fisheries Act) that followed it are expressions of the Crown's legal obligation to uphold Te Tiriti, particularly the guarantee that Māori would maintain tino rangatiratanga over our fisheries resources.
- 9. Our statutory purpose, set out in section 32 of the Māori Fisheries Act, is to "advance the interests of Iwi, individually and collectively, primarily in the development of fisheries, fishing, and fisheries-related activities, to:
 - a) ultimately benefit the members of lwi and Māori generally,
 - b) further, the agreements made in the Fisheries Deed of Settlement,
 - c) assist the Crown to discharge its obligations under the Fisheries Deed of Settlement and the Treaty of Waitangi and,
 - d) contribute to the achievement of an enduring settlement of the claims and grievances referred to in the Fisheries Deed of Settlement."
- 10. We work on behalf of 58 MIOs, who represent Iwi throughout Aotearoa. 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. We have sought feedback from Iwi on this response, and that feedback has been incorporated.

Koura (rock lobster) stocks

Better recreational catch information required to manage this important fishery

- 11. Koura are taonga. They are also a highly valued customary, commercial and recreational fishery. The value of this fishery attracts large investment in annual research and management reviews, making the commercial fishery one of the most closely monitored fisheries in Aotearoa. However, there is concern about the reliability of recreational catch and effort information. Because recreational take is so poorly understood, management focuses on constraining commercial catch rather than understanding total harvest. A more accurate understanding of recreational rock lobster fisheries, including amateur charter vessels, will strengthen the current assessment process and provide a better insight into the health of koura to support improved management. We encourage the exploration of different methods and initiatives for understanding recreational take in koura fisheries.
- 12. Parallel regulatory changes are required for the recreational sector to contribute to a TAC decrease and a corresponding reduction in the recreational allowance. Simply changing the recreational allowance does not constrain the recreational sector. Regulatory changes such as adjustments to bag limits and accumulation limits need to occur alongside TAC adjustments. If koura fisheries are viewed as shared, both the commercial and recreational sectors must play their part in ensuring sustainability.

Reducing and obtaining better estimates of illegal take should be a high priority for koura.

- 13. There is inadequate information on the size and nature of illegal take for all stocks reviewed. Although this is a difficult task, Te Ohu Kaimoana supports exploring different ways to gather better information on the extent of illegal take and measures to reduce the level of it.
- 14. Telson clipping is a viable way of ensuring that recreationally caught rock lobsters are not sold to unsuspecting buyers. This measure is a 'tool' in the 'toolbox' for addressing high levels of illegal take in rock lobster fisheries. We support the further implementation of such initiatives, particularly when supported by lwi.

Koura- Northland (CRA1)

Proposed Options

Stock	And the second se				Allowances		
	Option	TAC	TACC	Customary Māori	Recreational	Other mortality	(
	Option 1.1: Status quo	203	110		32		· /
CRA 1	Option 1.2: Decrease the TAC by 5%	193 🕹 (5%)	105 🕹 (5%)		27 🕹 (5 t)		CRA
Northland	Option 1.3: Decrease the TAC by 9%	185 🔸 (9%)	99 🕹 (10%)	20	25 🕹 (7 t)	41	CRA1
	Option 1.4: Decrease the TAC by 12%	179 🕹 (12%)	94 🕹 (15%)		24 🔸 (8 t)		

Table 1: Proposed management options (in tonnes) for CRA 1, 7 and 8 from 1 April 2022. (continued over the page)

Our view

15. We encourage Fisheries New Zealand to work with Iwi to determine the appropriate response for the CRA1 fishery.

Rationale

- 16. CRA1 is just above the reference level (and is predicted to continue to increase above this level over the next five years at current catch). We note that the determination of management targets for koura (CRA1) has been delayed. From our experience, setting the management targets are an integral step to ensure lwi aspirations inform how the fishery is managed. We see this as a crucial step prior to any adjustments to the TACC/TAC.
- 17. We acknowledge there is no sustainability concern under the current catch (status quo- option 1). This option also enables the fishery to increase above the reference level. While the fishery is at a low level, the stock's trajectory suggests the biomass is increasing. Under the proposed options, the vulnerable biomass is predicted to increase by 10% under status quo (option 1), between 10-20% under option 2, 20% under option 3 and 26% under option 4. We note that Ngāpuhi supports retaining the status quo for CRA1.
- 18. The inclusion of CRA1 in the April 2022 Round was a last-minute decision. Reviewing the CRA1 TAC appears to be a response to the judicial review of the Minister's decision to retain the status quo for the CRA1 (Northland) rock lobster fishery from 1 April 2021. The Environmental Law Initiative initiated the judicial review on behalf of Te Uri o Hikihiki Hapū. Making such a last-minute decision to include CRA1 disadvantages lwi as there is insufficient time to fully engage in the review process. Given the nature of quota management areas encapsulating numerous lwi rohe, it is essential that each lwi within CRA1 can work collaboratively to find equitable solutions. Such an opportunity has not been provided for in this instance. Rather than make a hasty decision, Te Ohu Kaimoana recommends a more considered process involving all impacted lwi.

Koura- Otago & Southern (CRA7 & CRA8)

Proposed Options

		X		Allowances			
Stock	Option	Option TAC TACC	TACC	Customary Māori	Recreational	Other mortality	
	Option 7.1: Status quo	126.2	106.2			5	
CRA 7 Otago	Option 7.2: Increase the TAC by 16%	146.5 🛧 (16%)	10 5 111.5 🛧 (5%)	5	20 🛧 (15 t)		
1.2.2.2	Option 8.1: Status quo	1282.7	1191.7			28	
CRA 8	Option 8.2: Increase the TAC by 9%	1394.5 🛧 (9%)	1215.5 🛧 (2%)	30	33	116 🛧	
Southern	Option 8.3: Increase the TAC by 11%	1430 🋧 (11%)	1251 🛧 (5%)			(88 t)	

Our view

19. We support an increase in CRA7 and CRA8. As CRA7 and CRA8 fall solely within the takiwa of Ngāi Tahu, they are best placed to provide feedback on the specific numerical settings.

Rationale

- 20. The science indicates that there is an opportunity to sustainability increase utilisation. A full stock assessment was undertaken in 2021. The stock assessment model projected that over the next four years, at current catch levels and recent recruitment, vulnerable biomass, total biomass, and spawning biomass for the entire CRA7 and CRA8 areas is projected to increase. We therefore support increased utilisation on the provision that Fisheries New Zealand commits to implementing Ngāi Tahu's aspiration for this fishery.
- 21. Ngāi Tahu have continually expressed concern over the lack of information and constraints on recreational fishing. As a result, there is an inability to meet their customary needs because it is difficult to find koura in inshore waters where whanau go fishing. A component of the allowance for customary fishing is intended to ensure that part of the TAC is uncaught to contribute to increasing the overall biomass. However, the growth of the recreational catch without being constrained by the allowance set for this sector serves to undermine the dedicated attempts for increased biomass.

Tipa (scallops) – Northland & Coromandel (SCA1 & SCACS)

Proposed Options

				SCA 1	a and a star	and the second second	land a start	
				Allowances	1. 2.9			
Option	TAC	TACC	Customary Mãori	Recreational	Other mortality	Mana	Management	
Current settings	30	10	7.5	7.5	5			
Option 1	30	10	7.5	7.5	5	Full closure (s11)		
Option 2	9.5 ↓ (20.5 t)	0 ✔ (10 t)	7.5	1 ↓ (6.5 t)	1 ↓ (4 t)	Partial Spatial closure (s11) and TAC, TACC and allowances	Recreational	
Option 3	16 🗸 (14 t)	0 🕹 (10 t)	7.5	7.5	1 ✔ (4 t)	TAC, TACC and allowances		
				SCA CS				
				Allowances		Mana	gement	
Option	TAC	TACC	Customary Māori	Recreational	Other mortality			
Current settings	81	50	10	10	11	2 2		
Option 1	81	50	10	10	11	Full closure (s11)		
Option 2	19 ✔ (62 t)	5 ✔ (45 t)	10	3 ✔ (7 t)	1 🕹 (10 t)	Partial Spatial closure (s11) and TAC, TACC and allowances		
Option 3	14 ✔ (67 t)	0 ↓ (50 t)	10	3 🗸 (7 t)	1 ↓ (10 t)	TAC, TACC and allowances	Recreational dredging prohibited	

Our view:

22. We encourage Fisheries New Zealand to work with Iwi to determine the appropriate response to the decline in the scallop fishery in SCA1 and SCACS.

Rationale:

Iwi are integral to creating successful fisheries management solutions

- 23. There is a sustainability issue in SCA1 and SCACS that needs to be addressed. Iwi need to be actively involved of any decision making regarding the future of these scallop fisheries. The consultation document itself highlights how Iwi have exercised their rangatiratanga and used customary tools to improve the health of scallop populations. Examples provided include Ngāti Hei implementing a closure of scallops in the East Coromandel coast in February 2021 and Ngāti Pāoa establishing a rāhui around Waiheke Island for scallops as well as other species in December 2021. However, these measures have not led to a recovery of the stock.
- 24. We encourage Fisheries New Zealand to work with lwi to find holistic solutions that consider all the impacts scallop populations face. These include land-use practises that introduce additional sediment, nutrients, pollutants, sediment disturbance and disease. This will require committed resources and time to ensure enduring solutions. A simple TAC adjustment is not enough to improve the health of SCA1 and SCACS.

Commitment to ongoing dedicated science for scallop fisheries is essential

25. Throughout Aotearoa, scallop fisheries are experiencing a decline. This decline can be attributed to both fishing and non-fishing related activities leading to a reduction in available scallops. Action is then taken to restrict or eliminate fishing, but the underlying cause is not addressed. The length of 14 and 9 years between biomass surveys in Northland and the Coromandel respectively highlights the lack of commitment to regular research and funding for these fisheries. By committing a long-term research plan to scallop fisheries, some of these issues can be better understood and recovery strategies developed. We strongly encourage such research to be shaped and to draw upon mātauranga of lwi in these rohe.

Hāpuka & moeone – West Coast and top of South Island & Central (West) coast North Island (HPB7 & 8)

Proposed Options

				H	PB 7			
				Allowance	S	Recreational Measures		
Option	TAC	TACC	Customary Māori	Other mortality	Recreational	Daily Limits	Additional regulations	
Current settings	N/A	235.5	N/A	N/A	N/A	5 per person	Included in the combined daily limit of 5 with kingfish with a maximum of 3 kingfish	
Option 1	164	110 ↓ (125.5 t)	20	6	28	2 per	Remove from the combined daily limit of 5 with kingfish and:	
Option 2	136	83 ↓ (152.5 t)	20	5	28	person	-Introduce daily limit of 2 hapuku/bass -Introduce accumulation limit of 3	
				Н	PB 8			
				Allowance	S	Recreational Measures		
Option	TAC	TACC	Customary Mãori	Other mortality	Recreational	Daily Limits	Additional regulations	
Current settings	N/A	80.1	N/A	N/A	N/A	5 per person	Included in the combined daily limit of 5 with kingfish with a maximum of 3 kingfish	
Option 1	87	65 ↓ (15.1 t)	10	4	8	2 per	Remove from the combined daily limit of 5 with kingfish and:	
Option 2	76	55 ↓ (25.1 t)	10	3	8	person	-Introduce daily limit of 2 hāpuku/bass -Introduce accumulation limit of 3	



Our view

26. We support option 2 for both HPB7 and HPB8.

Rationale

A reduction in catch is needed to ensure the sustainability of these fisheries

- 27. There is currently no robust assessment for these stocks. However, there have been ongoing concerns about the health of hāpuka and moeone. We support a significant reduction in catch as a first step in addressing these concerns. Despite targeted efforts, we cannot assess the health of these fisheries. Further work needs to be done to identify an effective approach to monitoring fisheries with high site fidelity and low productivity.
- 28. We agree that the recreational catch for both HPB7 and HPB8 needs to be reduced, along with the TACC. In previous sustainability reviews, we have set out our concerns with the lack of consideration of a link between a reduction in the recreational allowance with a new management measure that would reflect that allowance. We support sharing the responsibility of rebuilding and maintaining fisheries and therefore support the changes to recreational limits under option two.

We support the development and implementation of targeted measures with lwi to address management concerns

29. We acknowledge that a TAC reduction may not address some of the specific concerns for these fisheries due to the biology and nature of hāpuka and moeone. In particular, it will not address the risk

of localised depletion. Localised depletion affects customary access to hāpuka and moeone in shallow depth fishing grounds and this requires management action to address. The ability for Māori identity to be maintained through customary practice is already being undermined with the current state of the fishery. We encourage Fisheries New Zealand to work with the Iwi in HPB7 and HPB8 rohe to discuss options for managing these effects. We support effective Iwi and community-led initiatives that promote the health of a fishery.

28N rights reduce settlement holdings when TACCs are increased

30. We recognise that the preferential allocation (28N) rights associated with HPB7 will not be discharged due to the TACC decrease. We do, however, note that decreasing the TACC and additional measures to tiaki these fisheries is intended to result in a rebuild of the fisheries. Hence, we can anticipate a TACC increase when the fishery is rebuilt in the future. The impact of 28N rights on diluting the percentage of a TACC owned by Iwi needs to be addressed before the fishery rebuilds and consideration is given to a TAC increase.

We support aligning the deemed values of HPB7 and HPB 8 with HPB2

31. The proposed deemed values settings for HPB7 and HPB8 are between ACE and market price. We consider that to be an appropriate range for the deemed value to be set within.

Redbait- West coast South Island (RBT7)

Proposed Options

				(
Option	TAC	TACC	Customary Māori	Recreational	All other mortality caused by fishing	
Option 1 (Status quo)	2,991	2,841	0	0	150	- /
Option 2	842 🔸 (2,149 t)	800 🔸 (2,041 t)	0	0	42 🔸 (108 t)	
Option 3	421 ¥(2,570 t)	400 🔸 (2,441 t)	0	0	21 🔸(129 t)	
Option 4	105 🕹 (2,886 t)	100 ¥(2,741 t)	0	0	5 🕹 (145 t)	

Our view:

32. We support a decrease to the TAC.

Rationale:

Sustainability concerns should be addressed

- 33. The patterns being observed in the redbait fishery should be further evaluated. Although there is no clear indication of why catches are decreasing disproportionately to Jack mackerel catches, we agree that it is an area of concern that justifies management intervention. However, a one-off adjustment to the TAC is not the whole answer. We encourage continued monitoring of this fishery to check whether any management action that has been taken is effective.
- 34. Reducing the RBT7 TAC is unlikely to constrain the Jack mackerel fishery. At current levels of catch, a reduction in RBT7 will allow for full utilisation of that fishery.

We support reviewing the deemed values for RBT7

35. Deemed values are currently set above the market price. This does not create the right incentivise for accurate reporting. The deemed values should be set between ACE and market price. Setting the deemed value closer to the market price (but not above) for redbait may be the most appropriate response given that there are sustainability concerns.

Southern blue whiting- Bounty Platform (SBW6B)

Proposed Options

			Allowances			
Option	TAC	TACC	Customary Māori	Recreational	All other mortality caused by fishing	SBW1
Option 1 (Status quo)	2,888	2,830	0	0	58	5R
Option 2	2,309 🕹 (579 t)	2,264 🔸 (566 t)	0	0	45 🔸 (13 t)	SBW6B
Option 3	2,021 🕹 (867 t)	1,981 🕹 (849 t)	0	0	40 🔸 (18 t)	SBW6I

Our view:

36. Our view is to support TAC adjustments when they are demonstrably required to ensure sustainability. But we are not convinced that a TAC reduction will change existing fishing patterns.

Rationale:

The developing arrangements for pātaka kai require the setting of an allowance for customary harvest

37. We recommend the allowance for customary non-commercial fishing be set at one tonne. The pātaka system creates more opportunities for the customary take of commercially harvested species. We therefore support setting a customary allowance for SBW6B in order to make provision for customary non-commercial utilisation within a pātaka system.

Fisheries management discussions should be made with the best available information

- 38. There are indications that there is a recruitment pulse entering the fishery. However, the data that supports this view has not been fully assessed yet. We acknowledge that it is best practice to use information that has passed a peer review process to ensure it is robust. For this we rely on the fisheries stock assessment plenary process.
- 39. Section 11(1) of the Fisheries Act requires the Minister to take into account the effect of fishing on a stock before setting or varying a sustainability measure. In the case of SBW6B, landings have not been above 1,500 tonnes since 2017/18 and there has been no risk to the sustainability of the fishery though that period. This highlights that the collective management actions taken by the quota owners in this fishery are effective in maintaining catches at sustainable levels. This approach has the benefit of creating headroom that can be called upon in the event that recruitment pulses do enter the fishery. If it is confirmed that there is a strong recruitment pulse entering the fishery, the industry would be guided by the recommendations coming out of the fishery assessment process as to the significance of it and the extent to which catches could increase while still remaining within sustainable limits.
- 40. If the Minister considers that the effects of fishing are being managed through collective action, then the need to select a sustainability measure (such as a TAC reduction) under s 11(3) is greatly reduced. Accordingly, our view is that the current TAC/TACC settings should be retained.



8 February 2022

Fisheries New Zealand Fisheries Management Team By email: <u>fmsubmissions@mpi.govt.nz</u>

Review of Sustainability Measures for April 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 generations to come. TAHC fully supports Te Ohu Kaimoana's submission regarding the sustainability measures for the April 2022 fishing year. Those fish stocks relevant to the TAHC and its position with respect to each is set out below.

HPB7

Fisheries NZ (FNZ) options:

	HPB 7										
and the states			20.3	Allowance	IS	Recreational Measures					
Option	TAC	TACC	Customary Mãori	Other mortality	Recreational	Daily Limits	Additional regulations				
Current	N/A	235.5	N/A	N/A	N/A	5 per person	Included in the combined daily limit of 5 with kingfish with a maximum of 3 kingfish				
Option 1	164	110 4 (125.5 t)	20	6	28	2 per	Remove from the combined daily limit of 5 with kingfish and:				
Option 2	136	83 🔸 (152.5 t)	20	5	28	person	-Introduce daily limit of 2 hapuku/bass -Introduce accumulation limit of 3				

TAHC supports **Option 2** – a 152.5mt TACC reduction with new allowances of 20mt for customary, 28mt for recreational and 5mt for other mortalities

<u>RBT7</u>

FNZ options:

			Allowances				
Option			Recreational	All other mortality caused by fishing			
Option 1 (Status quo)	2,991	2,841	0	0	150		
Option 2	842 🔸 (2,149 t)	800 ¥(2,041 t)	0	0	42 🕹 (108 t)		
Option 3	421 🕹 (2,570 t)	400 🕹 (2,441 t)	0	0	21 🔸 (129 t)		
Option 4	105 ¥(2,886 t)	100 🕹 (2,741 t)	0	0	5 4(145 t)		

TAHC supports a TAC decrease and a review of the deemed value rates. The patterns being observed in the redbait fishery should be further evaluated. Although there is no clear indication of why catches are decreasing disproportionately to Jack mackerel catches, we agree that it is an area of concern that justifies management intervention. However, a one-off adjustment to the TAC is not the whole answer. TAHC encourages continued monitoring of this fishery to check whether any management action that has been taken is effective.

SBW6B

FNZ options:

			Allowances			
Option	TAC	TACC	Customary Maori	Recreational	All other mortality caused by fishing	
Option 1 (Status quo)	2,888	2,830	0	0	58	
Option 2	2,309 🕹 (579 t	2,264 🕹 (566 t)	0	0	45 🔸 (13 t)	
Option 3	2,021 🕹 (867 t) 1,981 🕹 (849 t)	0	0	40 🕹 (18 t)	

TAHC supports TAC adjustments when they are demonstrably required to ensure sustainability. Section 11(1) of the Fisheries Act requires the Minister to take into account the effect of fishing on a stock before setting or varying a sustainability measure. In the case of SBW6B, landings have not been above 1,500 tonnes since 2017/18 and there has been no risk to the sustainability of the fishery though that period. This highlights that the collective management actions taken by the quota owners in this fishery are effective in maintaining catches at sustainable levels. This approach has the benefit of creating headroom that can be called upon in the event that recruitment pulses do enter the fishery. If it is confirmed that there is a strong recruitment pulse entering the fishery, the industry would be guided by the recommendations coming out of the fishery assessment process as to the significance of it and the extent to which catches could increase while still remaining within sustainable limits.

Nāku noa, nā,

Andrew Harrison Investment Manager Tama Asset Holding Company Limited



8 February2022

Fisheries New Zealand Fisheries Management Team By email: <u>fmsubmissions@mpi.govt.nz</u>

Review of Sustainability Measures for April 2022 Fishing Year

Tēnā koe,

Whanganui lwi Fisheries Ltd (*WIFL*) is fully committed to the sustainable management of its fisheries and ensuring their protection and continued productivity for future Whanganui lwi generations to come.

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

HPB8

Fisheries NZ (FNZ) options:

	HPB 8										
		- minutes i		Allowance	15	Recreat	tional Measures				
Option	TAC	TACC	Customary Māori	Other mortality	Recreational	Daily Limits	Additional regulations				
Current settings	N/A	80.1	N/A	N/A	N/A	5 per person	Included in the combined daily limit of 5 with kingfish with a maximum of 3 kingfish				
Option 1	87	65 V (15.1 I) 10	4	8	2 per	Remove from the combined daily limit of 5 with kinglish and:					
Option 2	76	55 🔸 (25.1 I)	10	3	8	person	-Introduce daily limit of 2 häpuku/bass -Introduce accumulation limit of 3				

WIFL supports <u>Option 2</u> – a 25.1mt TACC reduction with new allowances of 10mt for customary, 8mt for recreational and 3mt for other mortalities.

RBT7

FNZ options:

Option			Allowances				
	TAC	TACC	Customary Māori	Recreational	RecreationalAll other mortality caused by fishing0150042 + (108 t)021 + (129 t)		
Option 1 (Status quo)	2,991	2,841	0	0	150		
Option 2	842 🔸 (2,149 t)	800 +(2.041 1)	0	0	42 +(108 1)		
Option 3	421 4(2,570 t)	400 1(2,441 1)	0	0	21 🔸 (129 1)		
Option 4	105 🕹 (2,886 1)	100 +(2,741 1)	0	0	5 🔸 (145 I)		

WIFL supports a TAC decrease and a review of the deemed value rates. The patterns being observed in the redbait fishery should be further evaluated. Although there is no clear indication of why catches are decreasing disproportionately to Jack mackerel catches, we agree that it is an area of concern that justifies management intervention. However, a one-off adjustment to the TAC is not the whole answer. WIFL encourages continued monitoring of this fishery to check whether any management action that has been taken is effective.

SBW6B

FNZ options:

			Allowances				
Option	TAC	TACC	Customary Maori	Recreational	All other mortality caused by fishing		
Option 1 (Status quo)	2,888	2,830	0	0	58		
Option 2	2,309 🔸 (579 1)	2,264 🔸 (566 l)	0	0	45 🔸 (13 1)		
Option 3	2,021 🔸 (867 1)	1,981 🕹 (849 l)	0	0	40 🔸 (18 l)		

WIFL supports TAC adjustments when they are demonstrably required to ensure sustainability. Section 11(1) of the Fisheries Act requires the Minister to take into account the effect of fishing on a stock before setting or varying a sustainability measure. In the case of SBW6B, landings have not been above 1,500 tonnes since 2017/18 and there has been no risk to the sustainability of the fishery though that period. This highlights that the collective management actions taken by the quota owners in this fishery are effective in maintaining catches at sustainable levels. This approach has the benefit of creating headroom that can be called upon in the event that recruitment pulses do enter the fishery. If it is confirmed that there is a strong recruitment pulse entering the fishery, the industry would be guided by the recommendations coming out of the fishery assessment process as to the significance of it and the extent to which catches could increase while still remaining within sustainable limits.

Nāku noa, nā,

Simon Karipa Chair, Whanganui Iwi Fisheries Ltd



40UTH 4310 | P O Box 929, Taranaki Mail Centre, Ν^(E) P VMOLITH 4340 Tel: (+64) € | E-mail: 2 www.taranaki.iwi.nz

8 February 2022

Fisheries New Zealand Fisheries Management Team By email: <u>fmsubmissions@mpi.govt.nz</u>

Review of Sustainability Measures for April 2022 Fishing Year

Tēnā koe,

Taranaki Iwi Fisheries Limited ('TIFL') is fully committed to the sustainable management of its fisheries and ensuring their protection and continued productivity for future Taranaki Iwi generations to come.

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

HPB8

Fisheries NZ (FNZ) options:

				Н	PB 8		
				Allowance	IS	Recreat	ional Measures
Option	TAC	TACC	Customary Māori	Other mortality	Recreational	Daily Limits	Additional regulations
Current settings	N/A	80.1	N/A	N/A	N/A	5 per person	Included in the combined daily limit of 5 with kingfish with a maximum of 3 kingfish
Option 1	87	65 ↓ (15.1 t)	10	4	8	2 per	Remove from the combined daily limit of 5 with kingfish and:
Option 2	76	55 ↓ (25.1 t)	10	3	8	person	-Introduce daily limit of 2 hāpuku/bass -Introduce accumulation limit of 3

TIFL supports **Option 2** – a 25.1mt TACC reduction with new allowances of 10mt for customary, 8mt for recreational and 3mt for other mortalities.



<u>RBT7</u>

FNZ options:

			Allowances				
Option	TAC	TACC	Customary Māori	Recreational	All other mortality caused by fishing 0 150 0 42 \checkmark (108 t)		
Option 1 (Status quo)	2,991	2,841	0	0	150		
Option 2	842 🔸 (2,149 t)	800 ¥(2,041 t)	0	0	42 🔸 (108 t)		
Option 3	421 4(2,570 t)	400 ¥(2,441 t)	0	0	21 🔸 (129 t)		
Option 4	105 ¥(2,886 t)	100 4(2,741 t)	0	0	5 🚽 (145 t)		

TIFL supports a TAC decrease and a review of the deemed value rates. The patterns being observed in the redbait fishery should be further evaluated. Although there is no clear indication of why catches are decreasing disproportionately to Jack mackerel catches, we agree that it is an area of concern that justifies management intervention. However, a one-off adjustment to the TAC is not the whole answer. TIFL encourages continued monitoring of this fishery to check whether any management action that has been taken is effective.

SBW6B

FNZ options:

			Allowances				
Option	TAC	TACC	Customary Māori Recreational		All other mortality caused by fishing		
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Nāku noa, nā,

Andrew Harrison Investment manager Taranaki Iwi Fisheries Limited

Maruehi Fisheries Limited



8 February 2022

Fisheries New Zealand Fisheries Management Team By email: <u>fmsubmissions@mpi.govt.nz</u>

Review of Sustainability Measures for April 2022 Fishing Year

Tēnā koe,

Maruehi Fisheries Limited ('MFL') is fully committed to the sustainable management of its fisheries and ensuring their protection and continued productivity for future Ngati Mutunga generations to come.

MFL fully supports Te Ohu Kaimoana's submission regarding the sustainability measures for the April 2022 fishing year. Those fish stocks relevant to the MFLand its position with respect to each is set out below.

HPB8

Fisheries NZ (FNZ) options:

HPB 8										
204	in star			Allowance	rs	Recreat	tional Measures			
Option	TAC	TACC	Customary Mãori	Other mortality	Recreational	Daily Limits	Additional regulations			
Current settings	N/A	80.1	N/A	N/A	N/A	5 per person	Included in the combined daily limit of 5 with kingfish with a maximum of 3 kingfish			
Option 1	87	65 ↓ (15.1 l)	10	4	8	2 per	Remove from the combined daily limit of 5 with kingfish and:			
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MFL supports **Option 2** – a 25.1mt TACC reduction with new allowances of 10mt for customary, 8mt for recreational and 3mt for other mortalities.

<u>RBT7</u>

FNZ options:

	24. S. M.			es	
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Option 4	105 🕹 (2,886 t)	100 🔸 (2,741 l)	0	0	5 🔸 (145 t)



Maruehi Fisheries Limited

MFL supports a TAC decrease and a review of the deemed value rates. The patterns being observed in the redbait fishery should be further evaluated. Although there is no clear indication of why catches are decreasing disproportionately to Jack mackerel catches, we agree that it is an area of concern that justifies management intervention. However, a one-off adjustment to the TAC is not the whole answer. MFL encourages continued monitoring of this fishery to check whether any management action that has been taken is effective.

SBW6B

FNZ options:

			Allowances			
Option	TAC	TACC	Customary Māori Recreational		All other mortality caused by fishing	
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Nāku noa, nā,

Alexander McKinnon Investment manager Maruehi Fisheries Limited



8 February 2022

Fisheries New Zealand Fisheries Management Team By email: <u>fmsubmissions@mpi.govt.nz</u>

Review of Sustainability Measures for April 2022 Fishing Year

Tēnā koe,

Te Atiawa (Taranaki) Holdings Limited (TATHL) is fully committed to the sustainable management of its fisheries and ensuring their protection and continued productivity for future TATHL generations to come.

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

HPB8

Fisheries NZ (FNZ) options:

				Н	PB 8		
		Service of		Allowance	IS	Recreat	ional Measures
Option	TAC	TACC	Customary Māori	Other mortality	Recreational	Daily Limits	Additional regulations
Current settings	N/A	80.1	N/A	N/A	N/A	5 per person	Included in the combined daily limit of 5 with kingfish with a maximum of 3 kingfish
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TATHL supports **Option 2** – a 25.1mt TACC reduction with new allowances of 10mt for customary, 8mt for recreational and 3mt for other mortalities.

<u>RBT7</u>

FNZ options:

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Option 4	105 ¥(2,886 t)	100 🕹 (2,741 t)	0	0	5 🔸 (145 ()		

TATHL supports a TAC decrease and a review of the deemed value rates. The patterns being observed in the redbait fishery should be further evaluated. Although there is no clear indication of why catches are decreasing disproportionately to Jack mackerel catches, we agree that it is an area of concern that justifies management intervention. However, a one-off adjustment to the TAC is not the whole answer. TATHL encourages continued monitoring of this fishery to check whether any management action that has been taken is effective.

SBW6B

FNZ options:

			Allowances				
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Nāku noa, nā,

Investment Manager Te Atiawa (Taranaki) Holdings Limited

Bob Gutsell President N PC Ha







NEW ZEALAND

8 February 2022

Submission: Review of rock lobster TACs in CRA 1, 7, and 8 for 2022/23

Recommendations

- 1. **The Minister adopt an amended option 1.4 for CRA 1** with a reduction in the Total Allowable Catch to 183 t by reducing the Total Allowable Commercial Catch (TACC) by 15% to 94 tonnes, retaining the current allowance for Maori customary fishing of 20 t, setting a recreational allowance of 28 t, and retaining the allowance for other sources of mortality at 41 t.
- 2. The Minister adopt option 7.2 for CRA 7 with an increase in the Total Allowable Catch to 146.5 tonnes by increasing the Total Allowable Commercial Catch (TACC) to 111.5 tonnes, retaining the current allowance for Maori customary fishing of 10 t, retaining the recreational allowance at 5 t, and increasing the allowance for other sources of mortality to 20 t.
- 3. If the Minister considers that a fifth increase in TACC in five years is warranted the submitters **support Option 8.2 for CRA 8** with an increase in the Total Allowable Catch to 1394.5 t by increasing the Total Allowable Commercial Catch (TACC) to 1215.5 tonnes, retaining the current allowance for Maori customary fishing of 30 t, retaining the recreational allowance at 33 t, and increasing the allowance for other sources of mortality to 116 t.
- 4. The Minister directs FNZ to start collecting data that would allow the next stock assessment of CRA 1 to include a separate assessment of East Northland (areas 903 and 904) and eventually separate management measures for these areas.

The submitters

5. The New Zealand Sport Fishing Council (NZSFC) appreciates the opportunity to submit on the proposals to review Total Allowable Catch (TAC), allowances and the Total Allowable

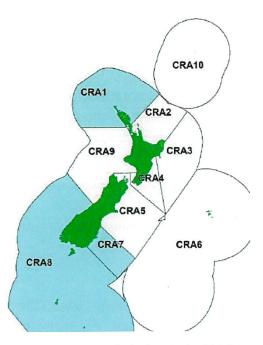
Submission. CRA 1, 7 & 8. Joint recreational. 8 February 2022.

Commercial Catch (TACC) for rock lobster (*Jasus edwardsii*) in Quota Management Areas CRA 1, 7 & 8. Advice was received on 14 December 2021 with submissions due 8 February, 2022.

- 6. The NZ Sport Fishing Council 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. <u>legasea.co.nz</u>.
- 7. The New Zealand Angling and 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.
- 8. The New Zealand Underwater Association comprises three distinct user groups including Spearfishing NZ, affiliated scuba clubs throughout the country and Underwater Hockey NZ. Through our membership we are acutely aware that the depletion of inshore fish stocks has impacted on the marine environment and the wellbeing of many of our members.
- 9. Collectively we are 'the submitters'. The joint 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].
- 10. Our representatives are available to discuss this submission in more detail if required. We look forward to positive outcomes from this review and would like to be kept informed of future developments. Our contact is Helen Pastor,

Background

- Rock lobster is an important species and fishery for all sectors in the Quota Management Areas under review. In the past rock lobster were abundant and played a significant role in coastal ecosystems. Large catches were taken out of some ports in the 1920s for canning and export to Europe. Widespread commercial rock lobster fishing has occurred since 1945. Updated estimates of recreational harvest are available from the 2017– 18 National Panel Survey. Few of the 7000 New Zealand residents on the panel caught rock lobster, so the estimates are best in areas where most fishing occurred.
- 12. CRA 1 is fished on the east and west coast of Northland. Since 1999 a large proportion of the commercial catch (30% to 50% per year) has come from the Three Kings area, a group of 13 islands about 55 kilometres northwest of Cape Reinga.



The Three Kings area represents just 1 of the 5 fisheries management statistical areas in CRA 1.

- 13. A new stock assessment for CRA 1 was completed in 2019. The base case estimated vulnerable biomass (males of legal size at the start of the fishing year) to be 15.5% of unfished biomass while spawning stock biomass (mature females) was at 37%. The Minister decided to reduce the TAC by 70 t (26%) with the aim of maintaining the stock at the current level. This was comprised of reductions to the TACC of 21 t (16%), a cut to the recreational allowance by 18t (36%), and the allowance of other sources of fishing mortality was revised in line with the estimate used in the stock assessment, down 31 t (43%).
- 14. In 2020 a rapid update assessment that used the 2019 model, with revised catch and updated commercial logbook data, predicted that vulnerable biomass would decline in the short term, even with the catch reductions introduced the previous year. However, a slight increase to about 16.5% of unfished vulnerable biomass was predicted by 2024. Following consultation in 2021 the Minister decided to retain the existing TACC for 2021-22.
- 15. The TACC in CRA 7 has decreased and increased in recent years, currently it is at 126.2 tonnes. The TACC in CRA 8 has been regularly increased over the last 5 years and is currently at 1192 tonnes, which is 44% of total rock lobster TACCs in New Zealand.
- 16. A new stock assessment for CRA 7 and CRA 8 was completed in 2021. Changes were made to some key model assumptions. It is generally accepted that rock lobster settle and grow in CRA 7 but many migrate into CRA 8 a few years after they mature. There is also uncertainty about the historic commercial catch that was probably caught in CRA 8 but landed in CRA 7 before catch was reported only by port of landing.
- 17. In 2021 the CRA 7 and CRA 8 fisheries were combined into a single assessment model but with two areas region 1 being Otago (CRA 7) and Southland (CRA 8) and region 2 being Fiordland (CRA 8). Both regions show a significant increase in CRA stocks over the last 15 years.
- 18. While rock lobster abundance has been increasing in the lower South Island the stock assessment for Fiordland (region 2) clearly shows that even the most productive area with the highest standing biomass can be fished down to below 10% of the unfished spawning biomass by excessive fishing pressure. In the mid 1980s there were over 200 commercial boats in CRA 8 for a total of more than 1.2 million pot lifts per year, for a reported catch around 1500 tonnes. Prior to the market disruption due to Covid-19 in 2018-19, there were 67 vessels catching more than 1 tonne of rock lobster that completed 290,000 pot lifts for a landed catch of 1070 tonnes. The current TACC in CRA 8 is 1192 tonnes.
- 19. Rock lobster stocks are less productive in the North Island and they also need to be carefully managed as productivity is declining and recruitment is variable.

Management proposals

20. Fisheries New Zealand and the National Rock Lobster Management Group (NRLMG) have released a Discussion Document proposing changes to the Total Allowable Catch (TAC) for rock lobster in three Quota Management Areas from 1 April 2022. Commercial fishers have changed to the new electronic reporting system which provides more detailed information but the catch rates (CPUE) that have been used to inform decision rules may not be directly comparable with the previous system. A new quantitative stock assessment has been completed for CRA 7 and CRA 8 combined. Rapid updates of previous stock assessments have been review and accepted

by the science working group. The rock lobster stock under review this year are CRA 1, CRA 7 and CRA 8 as in Table 1 below (Source: Fisheries New Zealand).

					Allowances		
Stock	Option	TAC	TACC	Customary Māori	Recreational	Other mortality	
	Option 1.1: Status quo	203	110		32		
CRA 1 Northland	Option 1.2 : Decrease the TAC by 5%	193 🔸 (5%)	105 🗸 (5%)		27 🕹 (5 t)		
	Option 1.3: Decrease the TAC by 9%	185 🕹 (9%)	99 🕹 (10%)	20	25 🕹 (7 t)	41	
	Option 1.4: Decrease the TAC by 12%	179 🕹 (12%)	94 🕹 (15%)		24 🕹 (8 t)		
004.7	Option 7.1: Status quo	126.2	106.2			5	
CRA 7 Otago	Option 7.2: Increase the TAC by 16%	146.5 🛧 (16%)	111.5 🛧 (5%)	10	5	20 🛧 (15 t)	
	Option 8.1: Status quo	1282.7	1191.7			28	
CRA 8 Southern	Option 8.2: Increase the TAC by 9%	1394.5 🛧 (9%)	1215.5 个 (2%)	30	33	116 🛧	
	Option 8.3: Increase the TAC by 11%	1430 🛧 (11%)	1251 🛧 (5%)			(88 t)	

Table 1: Proposed management options (in tonnes) for CRA 1, 7 and 8 from 1 April 2022. (continued over the page)

National Rock Lobster Management Group

21. FNZ and the Minister reviewed the membership of the National Rock Lobster Management Group (NRLMG) in 2020. New members representing recreational and Māori customary fishers and environmental NGOs were appointed. The terms of reference for the NLRMG have been revised and a summary of the work undertaken will be published in an annual report.

Remove the concessions

22. The submitters and NZSFC member clubs in CRA 3 have made it very clear repeatedly that the concession that allows commercial fishers to take male rock lobster with a tail width of 52 mm or 53 mm is unfair and must be removed. In 2014 these groups developed a <u>Crayfish 3 policy</u> that aims to increase the size and abundance of rock lobster in CRA 3 and ensure the needs of Māori customary and amateur fishers are met. That policy has been shared with FNZ and the NRLMG.

Crayfish 1 (CRA 1) Northland

CRA 1 Stock Assessment

23. CRA 1 has a range of environments from rugged, exposed coastline to the west, to the Three Kings area with upwellings and strong currents, and East Northland with extensive rocky coastline warmer waters and sheltered bays. Since the late 1990s there has been a significant increase in the proportion of catch taken from the reporting areas for the Three Kings area (901) and the west coast (939) where catch rates are higher and less has been taken from East Northland (903 and 904) where catch rates are lower. While area is taken into account in the analysis of CRA catch rates, much of the data that drives the stock assessment results comes from the north western area.

Submission. CRA 1, 7 & 8. Joint recreational. 8 February 2022.

- 24. The assumption that growth rates and recruitment are the same for the northwestern area and East Northland is probably wrong, but the Rock Lobster Science Working Group concluded that there was insufficient data collected from the East Northland commercial fishery to include it as a separate area in the CRA 1 stock assessment model. While we are told that fishing effort in East Northland has declined over the last year or so, data from the rock lobster catch and effort report (Starr 2021) shows that since 2008 45% of fishing effort and 37% of catch in CRA 1 has come from East Northland (Figure 1). This proportion of catch is higher than in CRA 3 and CRA 5 where 2 areas are modelled based on different tends in catch rate.
- 25. The only critical data missing from East Northland is commercial logbook data or observer coverage used to help estimate trends recruitment. If commercial fishers had self-reported the size of CRAs caught, or if observer coverage had been evenly spread across all statistical areas then a separate status of the stocks and management approach for East Northland would be available. Instead, observer coverage was focused where catch rates were highest and estimates of recruitment probably are not representative of all of CRA 1.

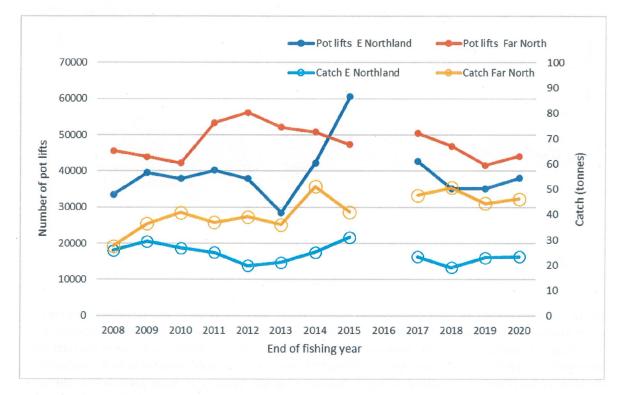


Figure 1: CRA 1 number of pot lifts and commercial catch (open circles) by fishing year. In 2016 two statistical areas (902 & 904) had less than three vessels catching 1 tonne of CRA or more and the data was not shown in the report.

- 26. The 2019 stock assessment estimated that the vulnerable biomass (males of legal size at the start of the fishing year) showed a flat or declining trend over the last 25 years (Figure 2). The base case estimated vulnerable biomass to be 15.5% of unfished biomass while spawning stock biomass (mature females) was at 37%.
- 27. The rapid stock assessment update in 2021 estimated that CRA 1 vulnerable biomass was 14.6% of the unfished level. By 2025, with 2021 catch levels and recent recruitment, CRA 1 vulnerable biomass is projected be at 15.8% (or 0.158) of unfished levels (median result), with a 90%

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probability it will be in the range of 9.2% and 26.8% of unfished levels (Figure 2). The uncertainty in the projections mainly comes from estimating future recruitment of young rock lobster to the fishery. The Discussion Document says that CRA 1 biomass is increasing when in fact it is effectively that same in 2025 as it was in 2019.

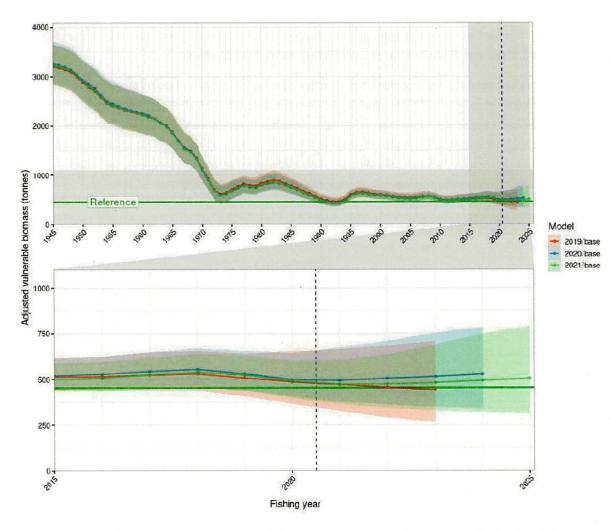


Figure 2: Results of the CRA 1 stock assessment with estimates the total weight (biomass) of legal rock lobster at the start of the fishing (vulnerable biomass) which excludes mature females that are mostly carrying eggs. The top graph shows the vulnerable biomass was fished down by the early 1970s and has been at a relatively low level since 1990. The horizonal green line is the reference level estimated intended to be a baseline for a discussion around setting management targets. The bottom graph zooms in on recent years to show the tend in biomass and four year projections from the 2019 stock assessment (red line and shading) prior to the 2020 reduction in the TAC. The blue line and shading show the result of the 2020 rapid update using the reduced TAC and the thin green line shows the result of the 2021 rapid update with data to March 2021 (dotted line).

- 28. The stock trend from the from the 2019 stock assessment and the 2021 rapid update are almost identical in 2020 and 2021 despite the reduction in the TAC and 16% reduction in the TACC. The rapid assessment results suggest that CRA 1 spawning biomass is 36% of unfished levels. Spawning biomass is expected to stay constant relative to 2021 levels.
- 29. What this shows is that under the status quo management settings the median of projected vulnerable biomass in 2025 will be about 15.8% of unfished levels which is not significantly

different for the 2019 vulnerable biomass of 15.5%. The submitters do not support maintaining this important cultural, social and ecological stock at close to historic low levels.

- 30. We submit the CRA 1 stock is not being managed to meet the purpose and principles of the Fisheries Act 1996, nor is it sufficiently abundant to enable people to provide for their social, economic and cultural wellbeings.
- 31. We submit that the CRA 1 stock needs to be rebuilt. The current size of the overall vulnerable biomass is close to its lowest historical level and is predicted to decline in the short term. While commercial fishing effort in East Northland is currently low, low stock abundance is severely limiting access to the fishery for recreational and customary fishers.
- 32. More work is required on real management targets in the coming year and the time frames to rebuild stocks. The submitters do not consider a vulnerable biomass around 16% in 2025 is an acceptable rebuild rate in this important shared fishery.

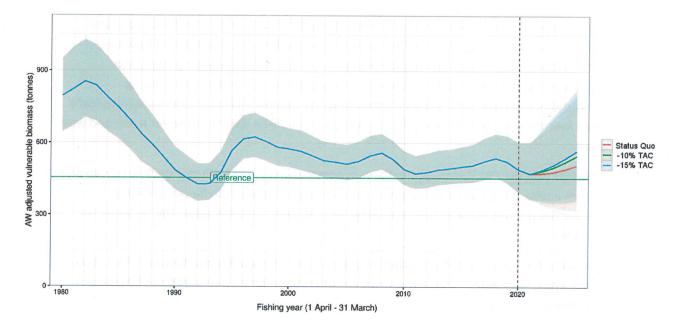


Figure 3: CRA 1 vulnerable biomass since 1980 and projections to 2025 based on status quo, a 10% reduction to the TAC, and a 15% reduction to the TAC including allowances.

- 33. Model projection using the 2020 stock assessment show that under the status quo the CRA 1 stock will about the same level in 2025 as it was when the initial 16% reduction to the TACC was made in 2020. The other projections are based on a 10% or 15% reduction in the TAC including all allowances (Figure 3). To achieve a plausible reduction in the recreational allowance a reduction in the daily bag limit would be required.
- 34. The submitters support a reduction in the Total Allowable Commercial Catch by 15% to 94 tonnes and the retention of the current allowance for Maori customary fishing at 20 tonnes and the allowance for other sources of mortality at 41 t. The recreational allowance used in the 2021 rapid update was 28 t based on the assumption that recreational catch is proportional to stock abundance. However, this is a 12.5% reduction in the current allowance of 32 tonnes and no estimates of the CRA 1 stock show a decline of that size.

- 35. The Fisheries Act 1996 section 9 says that, "All persons exercising or performing functions, duties, or powers under this Act, in relation to the utilisation of fisheries resources or ensuring sustainability, shall take into account the environmental principles". This includes FNZ staff and management, members of the NRLMG and the Minister. The principles include maintaining biological diversity of the aquatic environment and ensuring the long-term viability of associated and dependant species. If the vulnerable biomass in CRA 1 is around 15% of the unfished level, then East Northland must be close to 10%.
- 36. In our view, a 12% TAC reduction is required now with a further review after the next stock assessment in 3 years' time. Reducing the allowance for recreational fishing interests from 32 t to 28 t is a 12% reduction and is in line with the estimate used in this years rapid update. To help ensure an increase in rock lobster stocks in East Northland the submitters would support a consultation process to review the amateur bag limit in CRA 1. A step change in the TAC and bag limit in CRA 2 appears to be working to slowly rebuild the stock. A CRA 2 stock assessment this year will help quantify the level of change.
- 37. As discussed above, the marine environment of East Northland with its sheltered bays and relatively warm water where most recreational fishing effort occurs is different to where commercial fishing effort is now concentrated, in the Far North, Three Kings area, and northwest coast with cool water, currents, and upwellings. It is problematic drawing conclusions about the state of East Northland, where commercial catch rates have historically been low, based on a stock assessment based on primarily on data from the Far North and west coast.
- 38. It is clear that the CRA 1 management area is unmanageable. We want this stock to rebuild and cannot envisage that rebuild occurring if East Northland continues to be considered as productive and functional as the Three Kings and Far North western areas. This is simply not plausible.
- 39. The submitters recommend FNZ start collecting data that would allow the next CRA 1 stock assessment to include a separate assessment of East Northland (areas 903 and 904) and eventually separate management measures for these areas.

CRA 7 and 8 Stock Assessment

- 40. A new stock assessment for CRA 7 and CRA 8 was completed in 2021. As has been the case previously, the CRA 7 and CRA 8 fisheries were combined into a single assessment model but instead of allowing the model to estimate movement between CRA 7 & 8 the area was split into two areas region 1 being Otago (CRA 7) and Southland (CRA 8) and region 2 being Fiordland (CRA 8) with no movement assumed. Catch rates per pot lift are used as a relative measure of abundance but have not been included in the assessment since the change in the way catch is reported in new electronic reporting system.
- 41. The 2021 combined CRA 7 and 8 vulnerable biomass was estimated at 21% of the unfished level, and spawning biomass in 2021 was 48% of the unfished level. Plots of the trends in biomass by region are shown in Figures 4 and 5 below (Source: Fisheries New Zealand).

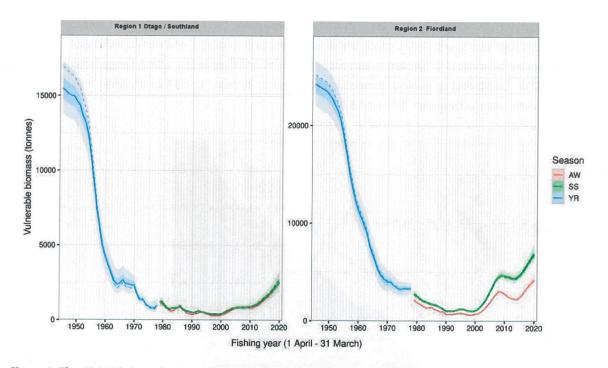


Figure 4: The CRA 7 & 8 stock assessment vulnerable biomass since 1945 spit by region. The autumn/winter line (AW red) is legal size males only, the spring summer line (SS green) includes legal size males and females.

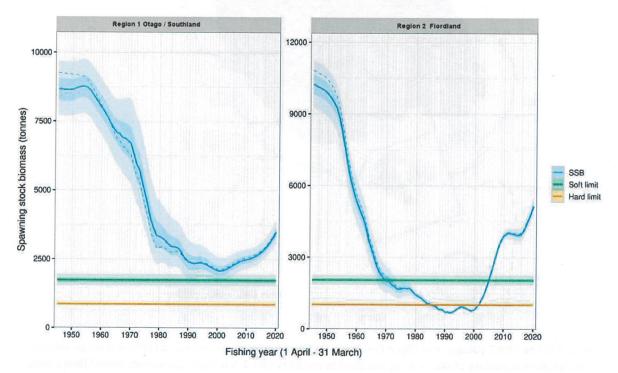


Figure 5: The CRA 7 & 8 stock assessment spawning stock biomass (SSB blue) since 1945 spit by region showing the soft limit (20% of unfished SSB green), and the hard limit (10% of unfished SSB orange).

42. These plots show that CRA 7 & 8 were fished down since the early 1950s, with the effort in the 1980s described above just the tail of that era. The model estimates that the Fiordland stock was in an overfished state (below the soft limit) from 1970 to 2006. Significant cuts to the TACC in the early 2000s (36% reduction in 3 years in CRA 7 & CRA 8) seem to be the turning point for the stocks.

Submission. CRA 1, 7 & 8. Joint recreational. 8 February 2022.

43. Rock lobster abundance is increasing in both regions under current management settings. Over the next four years, with 2021 catch levels and recent recruitment, the combined region vulnerable biomass is projected to increase to 25% of unfished levels with a range between 19% and 32%. Combined spawning biomass is projected to increase to 54% of unfished levels by 2025 with a range between 48% and 61%.

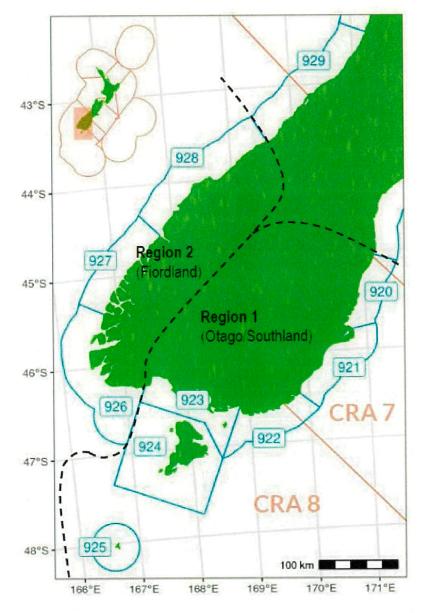


Figure 6: The CRA 7 (Otago) and CRA 8 (Southern) Quota Management Areas and statistical areas, showing approximate boundary of the two regions used in the 2021 CRA 7 & 8 stock assessment model (black lines).

Crayfish 7 (CRA 7) Otago

44. The biological stocks of rock lobster in the lower South Island do not align with the Quota Management Area boundaries and the stock assessment splits CRA 7 & CRA 8 into regions which are not stock boundaries but allow the model to work given the data available. The

proportion of the stock increase from region 1 that can be attributed to CRA 7 is uncertain so some caution is warranted.

- 45. The reference level modelling produced some implausible results when applied at the regional level. The combined CRA 7 & CRA 8 reference level is 14.5% of the unfished vulnerable biomass. Models on their own cannot set management targets. Wider considerations and stakeholder input are required and the general feeling is that the model-based reference points are useful as a lower bound for male vulnerable biomass in a similar way that the soft limit is a limit reference point for female spawning stock biomass.
- 46. The submitters support an increase in the TAC to better account for other sources of fishing related mortality (15 tonnes) and a modest increase in the TACC (5.3 tonnes) given the evidence of good recruitment and increased abundance. This lifts the TACC to 111.5 tonnes which is similar to the TACC of 112.7 tonnes set in 2017-18. There is no information to suggest that the allowances of 5 tonnes for recreational catch and 10 tonnes for Māori customary harvest is not adequate. These allowances may be reviewed when new information is available.
- 47. The current method of undertaking an annual rapid update using the stock assessment and one more years data will not be much use for CRA 7 given the area covered in region 1. Resolving some of the issues around catch recording under the Electronic Reporting System may help track fisheries trend, particularly in CRA 7.

Crayfish 8 (CRA 8) South Coast/Fiordland

- 48. CRA 8 is a productive rock lobster fishery with by far the highest commercial catch rates in New Zealand. This is a remarkable turnaround for this fishery considering that the spawning stock biomass was below the soft limit for 36 years and probably below the hard limit from 1986 to 2002 (Figure 4).
- 49. While the current rebuild is encouraging, CRA 8 used to be a very large stock and a large fishery and the vulnerable biomass in Fiordland (region 2) is about 21% of the unfished level. The TACC has been increased four times since 2017 from 962 t to 1192 t (24%) and the 59 t increase proposed for 2022 in option 8.3 equates to a 30% increase over 5 years.
- 50. The projections for region two presented to the Rock Lobster Plenary meeting show that at current catch the vulnerable biomass would stay around the current level. A 10% increase in catch across all sectors could see the vulnerable biomass decline by 10%. The submitters are opposed to such a large increase in the TACC on top of the four increases over the previous four years. This stock was over fished in the 1980s with catches around 1500 t, we do not recommend the Minister risks going there again.
- 51. If the Minister considers that another increase in the CRA 8 TACC is warranted, the submitters recommend that a modest increase of 2% (23.8 t) strikes the right balance of providing for utilisation without the risk of limiting the productive potential of the CRA 8 fishery or the flow on effects of good recruitment in CRA 7.
- 52. Historically, a concession was introduced to allow commercial fishers to harvest male rock lobster below the national minimum legal size when fishing was hard, and a high proportion of catch was small.

- 53. The submitters recommend the Minister revoke all concessions in the rock lobster fisheries, including CRA 7 & CRA 8, as the original purpose of the concessions is no longer valid.
- 54. The National Panel Survey estimated the recreational harvest in CRA 8 to be about 16 t (CV 36%), the balance of current allowance of 33 t is made up of 18 t of rock lobster reported from commercial vessels as recreational catch for the crew. While the submitters are comfortable leaving the recreational allowance at 33 t for now, if new information is collected then it can be revisited and reviewed.
- 55. It is concerning to hear of proposals from some groups to severely limit individual catch by recreational fishers on charter boats in Fiordland when this catch is really at the margin of overall catch. (1192 t current TACC, 117 t for other sources of fishing mortality mainly from commercial pots, and 18 t taken home by crews on commercial vessels). The Minister has a statutory duty to 'allow for' the mortality due to recreational fishing before he sets the TACC. The current allowance is to enable that recreational harvest to occur. The submitters will object If further constraints are imposed on recreational harvest when stock abundance is increasing, and commercial catch limits are being frequently increased.
- 56. The increase in the allowance for other fishing related mortality is in line with the estimates used in the stock assessment and is supported by submitters. A lot of crayfish are returned to the sea by commercial fishers in CRA 8 due to market preference and price. The previous 28 t allowance for other mortality is inadequate considering that it has not changed for a long time despite increased landed catch and number released.

9 February 2022

Fisheries New Zealand Ministry for Primary Industries PO Box 10420 Wellington

REVIEW OF SUSTAINABILITY MEASURES 2022 APRIL ROUND

Fisheries Inshore New Zealand (Fisheries Inshore) represents 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:

FISHERIES

NSHORE NEW ZI

- 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.

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).

We note that other organisations, companies and quota-holders and fishers may also make their own submissions on the proposals.

SCALLOPS

We comment first issues related to both SCA1 and SCACS and then in more depth on the SCACS proposals.

Option 1 Irrational

In both the SCA1 and SCA-CS fisheries FNZ is proposing to leave the Total Allowable Catch (TAC), Total Allowable Commercial Catch (TACC) and allowances in place but then institute a closure of each fishery and a prohibition on catch for all sectors under section 11 of the Fisheries Act. We are unable to understand the rationale for this – or its legality). If FNZ believes there is a sustainability issue, it behoves them to use the appropriate provision of the Act to effect the appropriate sustainability measures. Section 13 is the more appropriate provision where FNZ considers a full closure is warranted as stated in Option 1 for both fisheries. Our reading of the Act is that the Minister shall set a TAC that maintains the stock at or above a level that can produce the maximum sustainable yield. This is not discretionary – the Minister cannot set (or leave) the TAC at a level that will not at least return the fishery to that state.

Kaitiaki will always have the right, irrespective of the customary allowance setting, to issue permits for the taking of stocks where they consider it appropriate in the circumstances. The customary allowance is to indicate the expected level of take under kaitiaki permits and unlike the TACC does not represent a ceiling for catch. Leaving the TAC and other settings in place creates a confusion – it does not signal that there is a sustainability issue for the stock. If the Minister considers it necessary for the fishery to close, he should then reduce the TACC and allowances to zero. That would appropriately convey to all that in those circumstances a widespread sustainability issue exists. Those sustainability concerns would then be clear to kaitiaki, and we expect that as has been repeatedly demonstrated throughout the country where fishstocks need to be rested kaitiaki would recognise that when considering whether to issue any permit – in this case for scallops.

Furthermore, leaving the TACC at the existing level and then using section 11 powers to prevent fishing would see SCA1 and SCACS quota-holders liable to pay fisheries and conservation levies (SCA1 circa \$3,000 and SCACS circa \$48,000) notwithstanding not being able to catch their TACC allowances. Under the Fisheries Act and the Fisheries (Cost Recovery) Rules

2001, levies are payable where a TACC exists. It would be inequitable that quota-holders would continue to pay levies under the Option 1 proposals where fishing is prohibited. This would also be perverse in that under Option 1 where no catch is possible, quota owners would pay more than under Options 2 and 3 where reduced TACCs would apply. That is not acceptable. If the Minister determines that a full closure is warranted, then the TAC, TACC and allowances should all be set to zero using section 13 powers.

Options 2 and 3 Inequitable

We cannot accept that Options 2 and 3 for both SCA1 and SCACS provide an equitable allocation of the level of utilisation. If the Minister considers the abundance level requires a TAC reduction, as part of that decision-making, he needs to turn his mind to the allocation of that TAC. We consider that allocation should reflect the desire of all New Zealanders to be able to eat our fish. We are arguing that the fishery should not only be accessed by one set of harvesters – it needs to be managed for all and the allocation needs to be equitable and encourage all to look after the fishery.

Options 2 and 3 provide for the customary allocation to be retained at the status quo level with the commercial and recreational sectors bearing the reductions in utilisation levels. As per our comment above, we have every confidence that kaitiaki will exercise their discretion recognising the state of the fishery. The fact that such permitting has no 'ceiling' is an expression of its importance but it is wrong for the Ministry to suggest as acceptable to the fishery a customary allocation that has no basis. FNZ indicates it has no estimate of the customary catch levels, notwithstanding the reporting of take levels being a requirement under section 36 of the Fisheries (Kaimoana Customary Fishing) Regulations 1998. Yet they allocate the bulk of the allowable total catch to the customary sector while severely constraining the commercial sector in both options. Additionally, we note that maintaining the allowance at the level appears to be contradictory to iwi desires with Ngati Manuhiri imposing a rāhui tapū over much of the Hauraki Gulf and north Auckland's east coast, as concerns grow for diminishing tipa (scallop) numbers and Ngati Hei Trust having already called for and gained a section 186A closure over the east Coromandel area.

In SCA1, the commercial sector has a reported catch of 5 tonnes against a TACC of 10 tonnes. In comparison the estimated recreational catch of scallops in SCA1 was 20 tonnes compared to an allowance of 7.5 tonnes. In SCACS, the commercial sector catch in recent years averaged 12 tonnes against a TACC of 50 tonnes. The recreational take of scallops in SCACS is estimated to have been 37 tonnes compared to an allowance of 10 tonnes. While the commercial sector has operated within its allowable catch limits and does so to protect the sustainability of the fishery, the recreational sector has far exceeded its catch levels and is known to have virtually fished out some of the recreationally targeted beds. Notwithstanding that fundamental difference in behaviours and the commitment to sustainability by the commercial sector, FNZ proposes to reward the recreational sector with a disproportionate share of the allowable take. It is tragic that, in allocating the available catch, FNZ should seek to reward the sector that appears to have been the largest exacerbator of the sustainability problem. We consider that all should be subject to similar constraints and also to share the rewards of good management – provided you contribute to those solutions and do not exacerbate the problem. All sectors should go up – and down- on the tide of sustainability.

We agree with the proposition that recreational dredging should be prohibited in the areas as a constraint on the recreational take and to prevent damage to juvenile stocks. We would note however that where conditions allow, the removal of dredging will only see increased levels of dive activity to take scallops. As a further constraint for these fisheries at this time we consider it would be appropriate that FNZ adjust the daily bag limit. Currently a diver may take 20 scallops per day with the diver being able to take an additional daily bag of 20 scallops for up to two nominated safety people on board the vessel – a daily vessel bag of 60 scallops. We do not consider that appropriate in the circumstances and the limits should have been significantly reduced to at least a maximum of 10 per day and no more than 20 per vessel.

We note that the consultation considers that the absence of alternative commercial harvesting options supports removing any commercial catch. FNZ is currently consulting on a proposal to allow commercial fishers to use underwater breathing apparatus to harvest scallops. While decisions have yet to be taken on that consultation, any reference to the absence of alternative commercial harvesting options such as UBA should not be considered material in the consideration of the proposals.

SCA CS

Fisheries Inshore notes that the Coromandel Scallop Fishermen's Association (CSFA) is presenting a comprehensive submission on the proposed measures and future management of the fishery. Our comments are made in broad support of their submission.

The commercial sector has an objective to rebuild scallop stocks to a healthy state for the benefit of the current and future generations. Critical to achieving this is the development of a plan to transition the fishery to a more sustainable management model.

It is important to acknowledge that the status quo and stop-gap measures proposed to close the fishery for the short-term will likely fail to achieve this long-term outcome. In addition to fishing impacts, scallop stocks are facing increasing negative impacts from sedimentation from poor land management practices (both legacy and present-day inputs), invasive species, warming sea temperatures and productivity changes within coastal ecosystems. This is particularly evident in historically fished areas where scallops were once abundant but no longer support scallop populations. If we are to take an ecosystem approach to fisheries management, there must be action in response to all threats commensurate with the risk each threat poses.

The need for change was also recognised in both the "Sea Change" document and more recently in the Government's response "Revitalising the Gulf". As the CSFA have outlined, they will be a critical part of the solution to develop a transitional plan that will ultimately need to deliver benefits to all sectors that value scallop resources, including consumers.

Support to develop, fund and implement a transitional plan will be key to its success. We note that considerable government research investment is going into new technologies for scallop monitoring. We would support Government investment in research extending to assist industry develop low impact wild harvest techniques and aquaculture feasibility trials. It is vital that future investment and research delivers meaningful results, including commercially viable solutions for the benefit of fishers and regional economies including and beyond the Coromandel.

HPB 7 and HPB 8

The HPB fishery is important for the recreational (including the charter fleet) and commercial fishing sectors. The fishery deserves an active and informed management plan that uses the most effective combination of measures to sustain the biological, social, economic and cultural benefits associated with it. As Fisheries Inshore strongly endorsed for the HPB 1 and 2 stocks, we support establishing management processes and working with other stakeholders to implement enduring management action rather than a series of adhoc point-in-time decisions.

Fisheries Inshore attended the multistakeholder meetings that FNZ ran for HPB 7 and 8.

We endorse Southern Inshore's views in their submission. We acknowledge that, while there is insufficient information to determine the stock status, if it is not known if current catches or TACCs are sustainable, the TACC levels should not necessarily be reduced. Anecdotal information from stakeholders may be used to assist management decisions. When considering a declining catch trend, there are a multitude of factors that must be considered including poor port price, increased compliance cost, and increased expenses in general. Ultimately management decisions need to be driven by a combination of understanding changes in fishing effort and associated catch trends supported by scientific evidence of the stock status. In this consultation, FNZ has not undertaken an appropriate analysis to identify the cause of declining catch levels and then take management action in the light of informed sustainability assessments. Other than a declining commercial catch which may be explained in terms of changes in target catch, fishing methods and fisher behaviour, there is no other information which supports the need to reduce the TACC. Fisheries Inshore endorse Southern Inshore's views, that the TACCs for HPB 7 and HPB 8 should NOT be decreased solely on the basis of declining catch, without an understanding of why that is occurring.

Southern Inshore notes there has also been a shift in fishing effort from setnet to longline and some to Dahn line, and a reduction in BNS 7 where HPB 7 was being caught as bycatch. There is also significant recreational catch as was outlined in the FNZ multistakeholder meeting. Given the multitude of factors that could potentially be affecting the catch trend in HPB 7 Fisheries Inshore encourage FNZ to give wider consideration to other more localised impacts when considering dropping TACC for stocks, particularly when looking to manage HPB stocks across different areas.

Fisheries Inshore endorse Southern Inshore's submission for HPB 8. We do not agree with the proposed reduction to the TACC, given the lack of sustainability concern raised at the FNZ multistakeholder meeting. Again, there are several contributing factors that need consideration relative to the declining catch trend of HPB 8 including but not limited to changes in fisher behaviour, including significant avoidance of SNA 8 as acknowledged in our October 2021 sustainability round submissions. Additionally, as indicated by Southern Inshore the HPB 8 catch trend may be related to the change in TACC for BNS 8. Finally, there may be some change in trend due to Maui dolphin spatial closures and movement of catch to other areas.

Fisheries Inshore endorses further discussion with Southern Inshore to ensure the implementation of a TAC and recreational and customary allowances are reasonable for both HPB 7 and HPB 8 and better reporting of catch across all sectors.

Fisheries Inshore endorses Southern Inshore's submission on the deemed value review for HPB 7 and HPB 8.

OTHER INDUSTRY BODY MANDATED STOCKS

Fisheries Inshore endorses Southern Inshore Fisheries submission on the deemed value review for BCO7.

Fisheries Inshore endorses Southern Inshore's submission on RBT7.

Fisheries Inshore endorses Deepwater Group's submission on SBW6B.

FURTHER ENGAGEMENT

FINZ 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

11 February 2022



Sustainability Review April 22 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 APRIL 2022 ROUND

Fisheries New Zealand seeks feedback from tangata whenua and stakeholders on proposed changes to the sustainability measures for several selected fish stocks or stock groupings.

1. Executive Summary

lwi Collective Partnership (ICP) has interests and makes its submission on the 5 fish stocks in the following table.

Area	ICP Position
Rock lobster – CRA 1	We support both Option 1.1, status quo and Option 1.2, a TACC cut of 5%.
	 We support Option 1.1 because: (i) the IPP states that current settings over the next four years, will see vulnerable biomass increase by 10%, the stock is projected to increase to 115% of the BMSY reference level, and spawning biomass is predicted to stay constant at well above the soft limit of 20%, and (ii) A 15% TACC cut was implemented in 2020.
	We believe that the current state combined with the 15% cut in 2020, are sufficient to safeguard the future health of the fishery.
	However, we also accept that a 5% TACC reduction under Option 1.2 would recognise that CRA 1 is near the BMSY reference level and aim to increase the certainty that the stock will remain at or above this level. This option would ensure more than Option 1.1 that there is a healthy fishery and a larger biomass for all fisheries sectors, including customary. Therefore, we support both options.

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EMAIL kiaora@iwicollective.co.nz WEBSITE www.iwicollective.co.nz

Scallops – SCA 1 and SCACS	We support both Option 1 and Option 2 for SCA CS, and we support Option 1 and Option 2 for SCA 1. We also support MPI engaging with local iwi of both regions to develop a recovery plan for scallops.
	For clarity, in terms of those options that consider reducing the TACC to nil (effective) but maintaining a level of recreational catch, we do not support these options.
	The IPP options range from a full closure to partial closures of both fisheries. There is no status quo option. The drastic measures are the resolving of a significant decline in biomass demonstrated through a recent stock assessment.
Hāpuku/Bass – HPB 8	We support Option 1, a 19% reduction to the TACC.
	The IPP notes concern about the health of HPB 7 and 8 stocks following declines in commercial landings and reports of localised depletion from some stakeholders. Despite research efforts, HPB stocks are low knowledge stocks with no reliable estimates of biomass or yield. The IPP notes that the decline in the TACC caught in recent years is contributed to by reduced commercial effort.
	Recreational catch needs to be better managed. There is currently no TAC set for this fishery.
	We support the setting of a TAC for this fishery. We also support improved management of the recreational catch. In terms of options, we support Option 1 because it provides for utilisation and acknowledges that lower commercial landings recorded in recent fishing years is at least partly the contribution of reduced commercial effort. A 19% TACC reduction is supported as a precautionary acknowledgement that HPB 8 is a low knowledge stock (noting efforts to change this).
Redbait – RBT 7	We support Option 2, a 72% reduction to the TACC.
	The IPP notes that the average annual landings RBT 7 from the five-year period prior to redbait entering the QMS (2004/05-2008/09), compared to the most recent five fishing years (2016/17-2020/21) have reduced from 1,795 tonnes to 64 tonnes (96% reduction). Comparing these same periods for JMA 7, the average number of tows per year has decreased by only 39%.
	All FINZ options involve drastic reductions to the TACC. Ranging from status quo to a 96% TACC reduction.
Southern blue whiting – SBW 6B	We support Option 1, status quo.
	The IPP expresses concern that the best available information indicates that there has not been significant recruitment into the fishery since 2012. However, there is no evidence to support this to the extent that an additional TACC reduction is necessary to the 10% reduction already applied in 2020. Changes in catch levels could be the result of reduced commercial effort.
	Therefore, we support status quo due primarily to their being no evidence of a decline in biomass and given the 10% reduction already applied.

2. Iwi Collective Partnership

ICP is a limited partnership of Iwi fisheries entities representing mana moana mana whenua and iwi commercial fishing interests throughout Te Ika a Maui. It is a collaboration of the Iwi fisheries interests recognised in Te Tiriti o Waitangi and reaffirmed in the Fisheries Treaty Settlement and Deed of Settlement between Iwi Māori and the Crown. ICP is mandated to represent the interests of 19 of the 49 Iwi in Te Ika a Maui - refer to **table 2** below.

ICP 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				
Ngati Manawa	Ngati Manawa Tokowaru Asset Holding Company Limited				
Te Rarawa	Te Waka Pupuri Putea Limited				
Rangitaane	Rangitane o te Ika a Maui Limited				
Tapuika	Tapuika Holdings 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				
Ngai Tamanuhiri	Ngai Tamanuhiri Asset Holding Company Limited				

Table 2: ICP Iwi Members & Associates

Noho ora mai,

Maru Samuels General Manager

Mob:	•	
DDI:		
Em:		

То:	Ministry of Primary Industries
From:	Royal Forest & Bird Protection Society of New Zealand Inc
Contact:	Geoff Keey Strategic Advisor

Tuesday 8 February 2022

Submission on the April 2022 Sustainability Round

General Comments

Forest & Bird

Forest & Bird has the constitutional objective of taking all reasonable means to protect the native plants and animals and natural features of New Zealand. This includes in the marine environment. Key marine priorities for Forest & Bird include seeking a transition to ecosystem-based management and zero bycatch.

Ecosystem based fisheries management

Forest & Bird notes that zero non-target mortality and ecosystem-based management are also Government priorities under Te Mana o Te Taiao, the Aotearoa New Zealand Biodiversity Strategy.

The approach to the assessment of each of these stocks is still a long way from anything approaching ecosystem-based fisheries management. Each discussion document should first place the species within the trophic structure of the ecosystem, then identify the risks associated with methods of harvest before moving to consideration of the stock.

Better disclosure of information gaps required

There needs to be significantly better disclosure of where there are gaps in information. In relation to redbait, rock lobster and scallops, the lack of information in relation to are sufficiently large to raise doubts as to whether it is possible for the Minister to make an informed decision on the overall sustainability of the stocks. Given this absence of information, which goes beyond conflicting information, it will be essential for decisions on these fisheries to be made on a precautionary basis. In all three fisheries on sections 8(2)(b) and (9) matters:

Poor information requires precautionary decision making

The best available information provided by MPI is insufficient for the Minister to be confident that anything other than the most precautionary option is likely to meet the requirements of these sections. The Minister needs to pay due attention to the absence of information in relation to these stocks. Because the Minister needs to be cautious in the face of inadequate information, the most cautious option (lowest catch) should be adopted. This lack of data should not be used as a reason for postponing or failing to take precautionary action to achieve the purpose of this Act.

Reductions in CPUE are a warning sign for foraging wildlife

Where MPI notes a decrease in CPUE for a stock it should be presumed that it is equally likely that the foraging effort required by predators of the stock for a feed will have increased, altering the energy balance for the predator.

Where there are sustainability concerns options must constrain catches

Forest & Bird is concerned that for redbait and southern blue whiting, all options proposed by MPI fall short of constraining the stock despite sustainability concerns. In making decisions on stocks where there is a sustainability concern but the TACC remains higher than current catches, the Minister should agree to review the stock within 12 months with a view to constraining catches of the stock so that the stocks can rebuild.

Scallops (SCA 1 & SCA CS)

Forest & Bird seeks Option 1 which is full closure of both SCA 1 & SCA CS

The reasons for this are:

- The stocks are critically low to such an extent that the consultation document acknowledges that they are at risk of functional extinction in some areas.
- According to OIA response OIA21-1345, MPI does not hold any information on the level of the stock required to maintain ecological function either as carbon storage or as a water filter. MPI is therefore unable to establish a safe threshold of harvest in relation to either ecological function
- The effects of sedimentation on the stock are poorly managed.
- No information is provided by MPI to demonstrate that dredging can be carried out without significantly damaging the stock and the wider environment

In the event that the industry proposes an alternative method of managing the stock, this should not be included within the scope of the consultation but should be separately consulted on while the stock is closed so that all affected persons have the opportunity to review any industry proposed approach. Forest & Bird considers that MPI should be careful to avoid the mistakes made in the approach to tarakihi with an industry-led approach.

Irrespective of the TAC and TACC, Forest & Bird seeks a commercial and recreational ban on dredging for scallops. This method of fishing is destructive, indiscriminate and seriously damages the seafloor. Once the fishery is reopened after closure only low impact hand gathering methods should be permitted.

Forest & Bird notes local concerns about illegal scallop dredging carried out at night without lights. This is both a risk to the sustainability of the stock and a navigational hazard. Restrictions on harvest will need to be adequately policed.

Southern blue whiting (SBW 6B)

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Forest & Bird seeks Option 3 (TAC of 2021 tonnes) for SBW 6B

The reasons for this are:

- There has not been a significant recruitment event since 2012
- Although this TAC is unlikely to constrain catch which has not been above 1500 tonnes since 2018, it is the least risk option
- MPI should have proposed a TAC that would constrain catch to ensure sustainability

Forest & Bird is disappointed that despite that lack of significant recruitment into the fishery, the most conservative proposal for the TAC/TACC proposes a level of permissible catch that exceeds actual catches and therefore won't constrain catches to achieve sustainability.

Forest & Bird further seeks that all vessels in the fishery be required to fish at least 50m above the seabed. The reasons for this are:

- Bottom contact causes significant long-term damage to seabed habitats
- Repeated trawling of the same areas is likely to result in almost complete destruction of habitats
- Recovery can occur if bottom trawling is halted
- The fishery is primarily a midwater trawl and so the economic impact of ending bottom trawling should be minimised
- Management decisions should be made on the basis of the fishery as it currently operates and not be deferred while other processes occur

Redbait (RBT 7)

Forest & Bird seeks Option 4 (TAC 105 tonnes) for RBT 7

The reasons for this are:

- Forest & Bird agrees with the consultation paper that the 96% reduction in catches cannot be
 explained by a reduction in catch-effort. Given the lack of information about the state of the
 stock, and the large decline in catches, the most conservative option should be adopted.
- Forest & Bird notes that even this, the most conservative option, does not constrain current catches and that a lower TAC than this option would have been justified.
- Forest & Bird notes that redbait is a food for protected foraging marine life. In New Zealand, information is limited but it is recognised as a food source for gannets (see <u>https://www.doc.govt.nz/globalassets/documents/conservation/marine-and-coastal/marineconservation-services/meetings/presentations/pop2017-06-indirect-effects-comparison-studymilestone-7.pdf). In Australia it is recognised as a food source for tuna, marine mammals and seabirds.
 </u>
- An OIA response by MPI OIA21-1345 revealed that MPI holds no information on which ETP species forage for redbait or the stock level required to provide sufficient foraging. However, if fisheries are facing increased catch per unit effort, then it is also extremely likely that the effort required by associated and dependent species to forage for redbait will also have increased creating risks to those species.

Commented [WJ1]: TAC or TACC, I don't think there is any cultural or recreational catch of this species.

- The discussion document recognises that redbait are a food source for tuna but does not identify the stock level required to support tuna stocks or make any assessment on the impact of reduced stocks on the foraging effort required by tuna to catch redbait.
- Because of the lack of information in relation to the stock level required to support associated and dependent species, the lack of information on effects on associated and dependent species and therefore wider ecosystem structure and functioning, the most precautionary option should be adopted.

Crayfish (CRA 1)

Forest & Bird supports option 1.4 to decrease the TAC by 12%. The reasons for this are:

- The stock is estimated to be at around 15% of the unfished level and so is severely overfished. Under current management settings the stock is unlikely to rebuild at an acceptable rate and may not rebuild at all.
- Option 1.4 has the highest probability of helping the stock to rebuild
- Under section 9, the absence of management target should postpone action to achieve a rebuild
 of the stock and sustainable management of the fishery
- OIA21-1345 by MPI revealed that the Ministry has no information on the level of catch that
 would prevent kina barrens from establishing or that would facilitate recovery. MPI therefore is
 unable to establish a safe catch limit to maintain coastal ecological processes and to ensure the
 sustainability of the kelp and other associated and dependent species that rely on crayfish
 predation on kina. This lack of information should not postpone action to ensure sustainability
 and so a precautionary TAC should be set.



Submission by the

Royal New Zealand Society for the

Prevention of Cruelty to Animals Inc.

On Review of Sustainability Measures for 1 April 2022

8th February 2022



Executive Summary

- Fish are sentient beings, with the ability to feel pain and suffer and experience positive welfare states. They should be awarded the same level of consideration and protection that we give to other vertebrate animals.
- SPCA supports the move towards a more holistic approach to fisheries management, which recognises animal welfare as a distinct component of societal, economic and environmental sustainability of fisheries.
- Setting Total Allowable Catches (TACs) are an important tool in protecting against the unsustainable take of fish, however, they must be used as part of a wider suite of tools to improve the state of fish stocks. Changes in fishing behaviour and continued size and species selectivity of fishing gear may contribute to improving fish welfare in capture fisheries.
- Our organisation advocates that proactive measures must be taken towards tackling the issues of bycatch and fish discarding, including banning indiscriminate, destructive fishing methods.
- We support a 'One Welfare' approach to management which recognises the interconnectedness of animal welfare, human wellbeing and the environment.



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Introduction

The following submission is made on behalf of The Royal New Zealand Society for the Prevention of Cruelty to Animals (trading as SPCA).

SPCA is the preeminent animal welfare and advocacy organisation in New Zealand. The Society has been in existence for over 140 years with a supporter base representing many tens of thousands of New Zealanders across the nation.

The organisation includes 35 Animal Welfare Centres across New Zealand and approximately 60 inspectors appointed under the Animal Welfare Act 1999.

SPCA welcomes the opportunity to make a submission on the review of sustainability measures for April 1 2022.

Submission

SPCA advocates for the protection of the health and welfare of aquatic wild animals and their ecosystems, including species targeted for fishing and the unintended catch of non-target species of fish, sharks and marine birds and mammals. SPCA believes that animal welfare is a distinct component of the societal, economic and environmental sustainability of fisheries, and advocates that the welfare of wild-caught fish is addressed in the Animal Welfare Act (1999), as currently consideration of their welfare is excluded.

Our organisation supports decreasing catch limits when concerns over fish stocks, particular species or the marine environment emerge. The preferred options (out of the limited options provided by Fisheries NZ) selected below represent a precautionary approach to fisheries management. This precautionary approach gives weight to the uncertainty of how the fishery and the habitat that it supports may respond to potential changes in catch/fishing efforts. In addition, it acknowledges the lack of consideration of animal welfare in the review process and the limitations of the available data, which informed the proposed catch limits.



A. Southern Blue Whiting (SBW 6B)

A precautionary approach, e.g. Option 3, would be most appropriate for the management of the SBW 6B stock, considering there is no available estimate of current biomass and the uncertainty of the sustainability of the stock.

In addition to the sustainability of this fishery, SPCA is concerned with the impact of the fishing method used, i.e. bottom and mid-water trawling, on animal welfare and benthic habits. Target species in trawl fisheries face exhaustion, injury, asphyxiation and crushing during towing and hauling, with the possibility of death during capture (Waley et al., 2021). The risk of barotrauma and thermal shock increases with greater depths. Bottom trawling can also have a significant impact on seabed fauna. Ways to improve fish welfare during capture and minimise by-catch mortality, such as reducing towing speed and duration, reducing catch sizes and minimising ascent rates (Veldhuizen et al., 2018), should be considered in the management plans for this fishery.

SPCA calls on Fisheries NZ to include animal welfare in the management objectives in the scheduled update of the National Fisheries Plan for Deepwater and Middle-depth fisheries, southern blue whiting chapter.

B. Redbait (RBT 7)

SPCA shares Fisheries NZ's concern regarding the observed reduction in average annual landings of redbait in RBT 7 and our organisation is concerned by the lack of available information about stock structure or recruitment patterns and the lack of estimates of fishery parameters, abundance, biomass, or yield estimates for redbait fish stocks.

Our preferred option is Option 4 as it represents the most precautionary approach and should be reviewed once the update of estimated non-target catch for Jack mackerel trawl fisheries is completed.

Fisheries NZ expressed the concern that fishers may be constrained by the catch limits proposed under this option, as redbait is primarily caught as bycatch in the Jack mackerel target trawl fishery. However, if fishing efforts in these fisheries increase or if there is an increase in redbait biomass, it may



incentivise fishers to increase efforts to reduce bycatch, by modifying fishing gear, behaviour and/or methods to increase selectivity.

C. Hāpuku and Bass (HPB 7 & 8)

SPCA supports research efforts being made to inform estimates of biomass and yield of this low knowledge stock. Option 2 is the preferred option for both HPB 7 and HPB 8 as they adopt a more immediate, precautionary management approach based on the biological vulnerability of the stock and gives greater certainty of a positive impact on stock biomass. However, the proposed settings should be reviewed once further scientific information on the status of the stocks becomes available.

SPCA supports Fisheries NZ's recognition that beyond TAC decisions, a wider suite of tools are required to improve the state of the stocks. We argue that this is the case not just for hāpuku and bass, but for fisheries management in general. The adoption of a voluntary daily limit of hāpuku/bass by some recreational fishing clubs illustrates community concerns for the future of marine ecosystems. Societal demands for the conservation of wild life, avoidance of biodiversity impacts and more recently the recognition of fish welfare, means that fisheries must now be managed holistically. This can involve the use of integrated (i.e. across various sectors) policies, compromising of a range of tools, including habitat management approaches and guidelines for responsible fishing practices, in addition to harvest regulations, effort controls, or fishing area restrictions or closures (FAO, 2012). Setting recreational daily bag limits and TACs are an important tool in protecting against the unsustainable take of fish, however, they must be used as part of a broader, holistic approach to fisheries management.

Background

One Welfare in Fisheries Management

Our organisation supports Fisheries NZ's efforts to prioritise sustainability in our fishing industry and provide for social, economic and cultural well-being. In addition to protecting wild animal populations and their ecosystems, steps taken to protect the environment are likely to improve the well-being of

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individual fishes (Huntingford et al., 2009). Fish welfare should be a distinct (rather than subsumed) component of environmental sustainability, food security and economic development and thereby recognised in policy and regulatory decision making (Buller et al., 2018). SPCA advocates that Fisheries NZ more explicitly includes animal welfare into their fisheries management. We support a 'One Welfare' approach to management which recognises the interconnectedness of animal welfare, human wellbeing and the environment (Pinillos, 2018; Pinillos et al., 2016).

Fish feel pain and are recognised as sentient under the Animal Welfare Act (1999), which requires the welfare of at least some fish to be considered and safeguarded (Brown, 2015; Sneddon et al., 2018). Fish welfare is increasingly acknowledged as an important societal issue. Conscious consumers want assurance that the seafood they purchase has been caught or raised sustainably, responsibly and with consideration for animal welfare. This is reflected in the growing consideration of fish welfare by the aquaculture industry. However, compared to aquaculture, very few studies have addressed fish welfare in the context of commercial fisheries. Commercial fisheries management stands to benefit from the extensive information gathered from aquaculture research on fish welfare and product quality, particularly regarding handling and slaughter (Breen et al., 2020). Furthermore, technologies developed for aquaculture, especially innovations in humane slaughter, may be applicable in commercial fisheries (Huntingford et al., 2009).

As highlighted by Fisheries NZ in the consultation document, a wider suite of tools is required to improve the state of our fish stocks. The One Welfare framework can facilitate cross-disciplinary collaboration, where stakeholders work towards a common goal for improving animal welfare, human wellbeing, biodiversity and environmental sustainability (Council, 2019; Pinillos, 2018; Squance et al., 2021).

Improving Fish Welfare in Fisheries

SPCA is concerned that the review of sustainability measures does not address the systemic issue inherent in the Quota Management System (QMS), which sets catch limits for individual species, yet permits the use of destructive bulk fishing methods, such as trawling, which catch many species at once. The impact of the capture process on fish welfare may differ between gear types, fishing depths and durations.



A recent review on fish welfare in capture fisheries demonstrated that greater capture depths and longer fishing durations were associated with more external injuries and higher mortality across multiple gear types (Veldhuizen et al., 2018). Scale, skin and fin injuries occurred more frequently in trawls, purse seines, gill nets, traps and seines than in capture involving hooks. Mortality was generally higher in trawls, purse seines and seines than in gillnets, hooks and traps. Higher morality was also associated with a decreasing fish length and certain fish species. The authors concluded that such injuries and mortality could be reduced by reducing fishing duration or by bringing gear to the surface slowly to facilitate a more gradual change in depth pressure (to reduce pressure injuries).

Welfare impacts will vary depending on the specific method and gear used, however there are two common factors across fishing methods that can exacerbate potential welfare harms. These are duration of capture and crowding density (Waley et al., 2021). Efforts to reduce the duration of the capture process and decrease the density in fishing nets e.g. reducing catch weight, will likely result in improved animal welfare outcomes in commercial fisheries. Continued size and species selectivity of fishing gear may contribute to improving fish welfare in capture fisheries. The choice of gear type will involve a trade-off between the level and type of injuries, mortality levels and ecological and economic consequences such as by-catch and fuel costs (Waley et al., 2021).

Fish welfare in fisheries may also be improved through a change in fishing behaviour (e.g. changes in areas fished and/or gear configurations) to increase selectivity of target species and decrease bycatch of non-target species. SPCA strongly opposes the practice of discarding fish. Fish discarding is a systemic failure of fisheries management and results in the unnecessary suffering of target and non-target species. Fish discarding can result in the mass dumping of dead or injured fish into the ocean, largely due to 'high grading', catching undersized fish or over quota catching. The impacts of discarding in different fisheries depends on the survival rates of discards, which is linked to the species and the fishing gear (Davis, 2002). Therefore, bycatch and discard reduction should be a management objective for minimising welfare harms to wildlife and ensuring the sustainability of fisheries. Although, progress has been made in reducing discards through changes in fishing behaviour, improvements in fishing gear selectivity and allowing bycatch to escape through grids, panels or increased mesh sizes, there remains large gaps in knowledge of the fate of these animals once they escape gear or are discarded after landing on deck.

SPCA submission on review of sustainability measures for 1 April 2022

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One way to prevent the unjustifiable damage being caused to the marine environment by the large quantities of fish discarding is to ensure that 'unwanted' fish and other species are not caught by commercial fishing vessels in the first place. Therefore, New Zealand must ensure that it is safeguarding the future of our marine ecosystems by banning destructive, indiscriminate fishing practices. Trawling has been successfully banned in Hong Kong, Indonesia, and Kenya (Bailey, 1997; Munga et al., 2012; Tao et al., 2018). Increasing the number and size of protected areas where trawl fishing is banned in New Zealand is a positive step, however it is not enough, as it may simply result in concentrated fishing efforts in the remaining available trawl areas.

Fisheries Data Reporting

SPCA is concerned with the lack of scientific data available to run the Quota Management System (QMS). A large proportion of stock assessments rely on catch/effort data provided by the industry, rather than fisheries-independent surveys. This is problematic, given that in New Zealand widespread illegal dumping and misreporting has been identified as having distorted catch statistic for decades (Simmons et al., 2016; Slooten et al., 2017). It is essential for fisheries management and sustainability that we improve the transparency and reliability of fisheries data reporting of target and non-target animals (Simmons et al., 2016). Compounding this issue is the low level of on board observer coverage and lack of effective enforcement (Simmons et al., 2017). SPCA strongly supports the wider rollout of on-board cameras on fishing vessels to improve the quality of fisheries.

SPCA applauds Fisheries NZ for making moves to address illegal discarding and improve the quality of fisher reporting data across the inshore fleet. Electronic monitoring (EM) can indeed improve fisheries data and incentivise compliance with fisheries regulations and discard reduction, however it will not stop bycatch and discarding from occurring. SPCA believes the problem lies with the permitted use of destructive, indiscriminate fishing methods (such as trawling) and the continuation of the Quota Management System (QMS). Although outside of the scope of this consultation, our organisation urges Fisheries NZ to address these issues, which threaten animal welfare and other objectives of sustainable fisheries management. SPCA supports the move towards a more holistic approach to

SPCA submission on review of sustainability measures for 1 April 2022



fisheries management, which recognises animal welfare as a distinct component of societal, economic and environmental sustainability of fisheries.

Conclusion

Fish are recognised as sentient beings, with the ability to feel pain and suffer and also experience positive welfare states. They should be awarded the same level of consideration and protection that we give to other vertebrate animals. Our organisation advocates that proactive measures need to be taken towards tackling the issues of bycatch and fish discarding, including banning indiscriminate, destructive fishing methods and a move towards a holistic approach to fisheries management, which identifies animal welfare as a distinct component of the societal, economic and environmental sustainability of fisheries.

SPCA appreciates the opportunity to contribute to the review of sustainability measures for 1 April 2022 and would welcome further engagement on this issue. If any further information is required, the Society is happy to discuss this matter further.



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30 January 2022

Review of Rock Lobster Sustainability Measures for 2022/23 -Fisheries New Zealand P O Box 2526 Wellington 6140 Email:- FMSubmissions@mpi.govt.nz

Submission on the Review of Rock Lobster Sustainability Measures for 2022/23

Introduction

Ecological Impacts of Fishing Activities

I have undertaken scientific research on *Jasus edwardsii* for over 20 years, mostly in relation to the basic biology and ecology of the species. I have also worked extensively on the biology and ecology of other rock/spiny lobster species around the world. From my own research and extensive personal experience of the marine environment in New Zealand I am very concerned by the widespread and significant ecological impacts being caused by the reduction in densities and size range of rock lobsters in coastal habitats as a result of fishing.

Widespread coastal areas of the Northland, Hauraki Gulf, Bay of Plenty and East Coast have shown marked changes in reef habitats – transition from macroalgal-dominated habitats to urchin barrens. In some areas, the change has been estimated to have affected well over 50% of reef habitats. There is good evidence that once urchin predator populations (e.g., rock lobster, snapper, blue cod) increase locally, then the macroalgal habitats are restored. The consultation document discusses this issue but appears to be agnostic about attempting to address the issue in any coherent way. This is a small shift from previous sustainability documents released by Fisheries New Zealand, which have claimed that kina predator populations and declining macroalgal populations are "controversial" among scientists.

Personally, I find it remarkable that a Crown agency with a legal mandate to ensure sustainable management of the marine environment is so averse to recognising and dealing with this issue. In contrast, if this was a coastal consent application with a regional council and this issue of an adverse affect on the ecosystem was raised by scientific experts, such as myself, there would very careful consideration of whether to proceed with the activity.

The widespread decline of macroalgal habitat in New Zealand is of serious concern for a range of scientifically sound reasons, but Fisheries New Zealand continues to overlook the evidence that the reduction of the abundance and size of rock lobsters is a significant contributor to this adverse effect in our marine environment.

Likewise, the rock lobster industry continues to refuse to acknowledge this potential adverse effect from their activities. This is unfortunate, because research strongly suggests that the widespread loss of macroalgal habitat also reduces lobster recruitment through the removal of macroalgal settlement cues, the loss of key lobster nursery habitat, and a greatly diminished abundance of invertebrate food supply, all of which are critical to the initial establishment of post-settled juvenile lobsters. Collectively, in my view it is highly likely that the loss of macroalgal habitat is also significantly depressing the successful recruitment of lobsters into the fishery.

Macroalgal habitats are highly productive (many more times than urchin barrens), are highly biodiverse, provide habitat structure and high-quality food sources for recruiting organisms, such as lobster and fish, and are therefore vitally important in maintaining the ecosystem function of our coastal environment. Macroalgal habitats generate large quantities of particulate and dissolved organic matter which contribute greatly to the productivity of the ecosystem well beyond the boundaries of the habitat. Furthermore, recent scientific evidence indicates that macroalgal habitats are major contributors to carbon sequestration. The widespread loss of macroalgal habitat is clearly an "adverse effect" on the ecosystem.

There is good evidence that the widespread loss of this macroalgal habitat is associated with fishing activity, and it is clear that the scale and nature of the impact qualifies as an "adverse effects of fishing on the aquatic environment" and therefore should be of serious concern to fisheries managers and rock lobster fishers alike (Sections 8 and 9 of the Fisheries Act 1996).

Given addressing this concern is a requirement of the Fisheries Act, and that Fisheries New Zealand has a commitment to managing fisheries in an ecologically sustainable manner, it could be expected that the agency would be actively investigating and managing the potential link between fishing activity and this adverse ecological change.

However, the "Review of Rock Lobster Sustainability Measures for 2022/23" sidesteps taking any actions to address the potential for lobster fishing activity to be the cause of this widespread and adverse environmental change.

Given the unwillingness of the Fisheries New Zealand to undertake an informed scientific assessment of the potential adverse ecological effects generated by lobster fisheries, then management decisions should be cautious and minimise the future harvests from all coastal rock lobster populations.

The Fisheries New Zealand needs to address this ecological concern with some scientific credibility in future fisheries assessment as per its stated policy commitment to do so.

Thank you for considering my submission.

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Andrew Jeffs Professor of Marine Science

Ngātiwai Trust Board

ALT AUST BOARD

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bill id

مسطل الالحاج

8 February 2022

Fisheries New Zealand Fisheries Management Team By email: <u>fmsubmissions@mpi.govt.nz</u>

Review of April Sustainability Measures for 1 April 2022-23 for CRA1, SCA1 and SCACS

Tēnā koe,

Ngātiwai Holdings Limited (QRN 9791875) and Ngātiwai Fishing Limited (QRN 9210001) are both fully owned subsidiaries of Ngātiwai Trust Board. All are fully committed to the sustainable management of its fisheries and ensuring their protection and continued productivity for future Ngātiwai generations to come.

In the context of this submission, the entities own the following quota:

- (i) Ngātiwai Holdings Limited (NHL)
 - CRA1 1,725,910 quota shares (1,899kgs QWE)
 - SCA1 4,692,772 quota shares (469kgs QWE)
 - SCACS 2,749,830 quota shares (1,375kgs QWE)
- (ii) Ngātiwai Fishing Limited (NFL)
 - CRA1 3,431,964 quota shares (3,775kgs QWE)

The NHL and NFL submissions in relation to CRA1, SCA1 and SCACS are detailed below.

1. Kõura – Red Rock Lobster CRA1

1.1 The options put forward by Fisheries NZ (FNZ) are:

Stock				Allowances		
	Option	TAC	TACC	Customary Maori	Recreational	Other mortality
	Option 1.1: Status quo	203	110	1	32	41
CRA 1	Option 1.2: Decrease the TAC by 5%	193 🕹 (10 t, 5%)	105 🗸 (5 t, 5%)		27 🕹 (5 t)	
Northland	Option 1.3: Decrease the TAC by 9%	185 🔱 (18 t, 9%)	99 🔸 (11 t, 10%)	20	25 🔸 (7 l)	
	Option 1.4: Decrease 179 4 (24 t, 12%) 94 4		94 🔸 (16 t, 15%)		24 🔸 (8 l)	

- 1.2 NHL / NFL are concerned at the state of the CRA1 fishery and, whilst current projections indicate a recovering fishery, there remains risk to this rebuild and further action is required.
- 1.3 NHL / NFL strongly encourage FNZ to work with Iwi to determine the appropriate response to the fishery.
- 1.4 NHL / NFL support <u>Option 1.4</u> a TAC decrease from 203mt to 179mt with a 94mt TACC, 20mt allowance for customary, 24mt for recreational and 41mt for other mortalities.
- 1.5 For the recreational sector to make any contribution to this TAC decrease, parallel regulatory changes are required. Merely changing the recreational allowance does not constrain the recreational sector.
- 1.6 The 8mt recreational allowance reduction under Option 4 equates to a 22% decrease. Unless the daily bag limit is reduced by regulation, it is highly improbable this recreational allowance reduction will be achieved, thereby compromising the fishery. NHL / NFL support a daily bag limit reduction from the current 6 per person to 4 per person. Such recreational allowance reductions have been implemented in a number of other fisheries with success and is required for CRA1 given its high recreational activity.
- 1.7 Illegal take of kõura is a serious concern. Reducing and obtaining better estimates of illegal take should be a high priority for kõura. Although this is a difficult task, NHL / NFL support exploring different means of gathering both better information and reducing the illegal take by way of increased compliance activity.

2. <u>Tipa – Scallops SCA1 & SCACS</u>

2.1 The options put forward by Fisheries NZ (FNZ) are:

Section 200	and the strength	and the second	Williams !!	SCA 1	and the second	a started of many	
				Allowances		-	
Option	TAC	TACC	Customary Māori	Recreational	Other mortality	Manag	gement
Current settings	30	10	7.5	7.5	5		
Option 1	30	10	7.5	7.5	5	Full closure (s11)	
Option 2	9.5 ↓ (20.5 t)	0↓(101)	7.5	1 4 (6.5 l)	1 ↓ (4 I)	Partial Spatial closure (s11) and TAC, TACC and allowances	Recreational - dredging prohibited
Option 3	16 🗸 (14 t)	0 🕹 (10 1)	7.5	7.5	1 ↓ (4 t)	TAC, TACC and allowances	
				SCA CS	(Carl and and the second	and the second	
			-	Allowances	Managem		gement
Option	TAC	TACC	Customary Māori	Recreational	Other mortality		
Current	81	50	10	10	11		
Option 1	81	50	10	10	11	Full closure (s11)	
Option 2	19 🗸 (62 l)	5 ↓ (45 t)	10	3↓(71)	1 🗸 (10 I)	Partial Spatial closure (s11) and TAC, TACC and allowances	
Option 3	14 🗸 (67 t)	0 ↓ (50 t)	10	3 🗸 (7 1)	1 + (10 1)	TAC, TACC and allowances	Recreational dredging prohibite

- 2.2 NHL is concerned at the declining state of both SCA1 and SCACS fisheries. Urgent and significant action is required.
- 2.3 NHL supports <u>Option 1</u> full closures to both the SCA1 and SCACS fisheries. Note, under section 11 of the Fisheries Act, this closure would not extend to customary take. NHL supports this.
- 2.4 NHL strongly encourages Fisheries New Zealand to work with Iwi to determine the appropriate response to the decline in the fisheries.

We would be happy to speak to this submission if required.

Nāku noa, nā,

Brandon Edwards Chair, Ngātiwai Holdings Limited Chair, Ngātiwai Fishing Limited

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

SOUTHERN INSHORE

8 February 2022

Review of Sustainability Measures for 1 April 2022

- 1. Thank you for this opportunity to comment on the review of sustainability measures for HPB7, HPB8 and RBT7 within the April Sustainability round.
- 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. Whilst it is encouraging to see the review of October stocks within the April round, we are still disheartened to see the lack of stocks being reviewed each year. There is an opportunity for Fisheries New Zealand (FNZ) to review both low knowledge and other stocks with a higher level of information. FNZ should not be tasking their managers to simply look at stocks where the TACC is under-caught. That is what has occurred again this year in respect of HPB7, HPB8 and RBT7.
- 5. Stocks chosen for review because the TACC has not been caught should not be considered until the review into cost recovery is completed, as well as a management framework that includes how stocks that are managed by catch landing are to be monitored.
- 6. Southern Inshore have reviewed all stocks where the catch is significantly under-caught and we note that the current cost recovery on these stocks is upward of \$900k. Any consideration to review the TACCs downwards would require the distribution of required cost recovery against other stocks and for that reason, the SIF Board remain reluctant to act. This is an entirely inappropriate outcome and discourages CSO's from managing the stocks they represent in a more cost-effective and meaningful way. FNZ need to urgently address the inadequacies with the current Cost Recovery model.
- 7. With regard to the development of the RBT7 component of this submission, Southern Inshore have worked closely with Deepwater Group Ltd who have quota-owners mandate for the JMA7 and whose members operations are most involved in RBT catch.
- 8. The contact for this submission is Carol Scott.

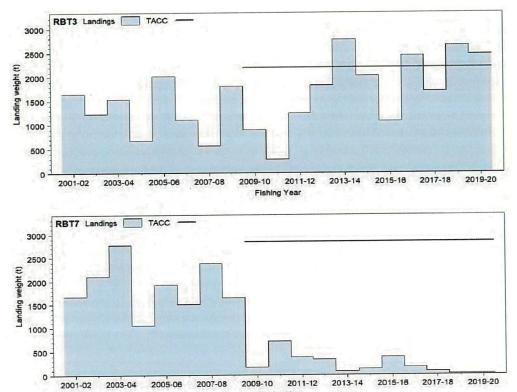
Lack of fishstock review and strategic approach

9. The annual process for Southern Inshore is the promotion of fishstocks for TACC reviews (up or down) and/or deemed value review on the basis of ongoing catch trends, science analyses and trawl survey output.

- 10. With around 670 fishstocks in the quota management system, something drastic has to happen within fisheries management to ensure that there are more timely reviews and responsive management across all of the most affected fishstocks, including any low knowledge stocks. FNZ needs to put faith in CSO's and SRE's and recognise that the stocks they present for review are relevant and typically supported by the necessary science. CSO's and SRE's do not present stocks for review at any arbitrary level. They do so based on catch trends, promoted by fishermen and quota owners and advanced based on the best available science. It is disappointing that very few stocks are being reviewed, FNZ need to seriously take on board what is being proposed overall recognising that a mutual improvement in the management process is essential moving forward.
- 11. FNZ continually reference the National Inshore Finfish Fisheries Plan and the fact that stocks 'will' be managed under this Plan, although that is yet to be finalised. Stocks suck as those proposed in this consultation round RBT7, HPB7 and HPB8 are not priority stocks under the draft plan. There are a number of other stocks that could have been prioritised and the April round consultation optimised for those stocks. FNZ cherry picked stocks that they presumed must have some issues because they have not been fully caught. They failed to review the stocks fully and look into the data and in the case of HPB simply took anecdotal information as being the precursor and supposed evidence to reviewing the stocks. Looking simply at a single-stock does not fully reflect the overall relationship between stocks nor the external influences that are currently affecting local catch and abundance in many stocks.
- 12. Access to additional, sustainably managed ACE is the optimal outcome for fishers. Improved revenue from legitimate TACC increases for quota-owners and fishermen within this area obviously supports the Government Growth Strategy and their desire to provide greater economic opportunity.
- 13. Industry want and deserve, given the money they contribute, to be involved in a seamless, flexible, scientifically supported and robust TACC setting process that occurs each year in a transparent and meaningful way and reflects the stocks that most need review. We want some return on our investment and no longer want to be regarded as 'poor cousins' in an inshore fishery that is blossoming as a result of the management measures that commercial have adopted. We encourage FNZ to show the leadership and courage required to deliver some return on this long-term investment.

REVIEW OF REDBAIT (RBT7)

- 14. Southern Inshore Fisheries support <u>OPTION 1</u> to maintain the Status Quo based on the paucity of information presented by FNZ and the additional information and hypothesis presented below.
- 15. The proposition by FNZ to reduce the TACC of RBT7 on the basis of reduced landings and suggesting this stock as a "potential sustainability risk associated with current management settings" is not an appropriate management approach.
- 16. The proposed TACC reductions do not take into consideration any potential future increase in the abundance of the stock back to the levels of 2008 and prior, nor any consideration on what external influences may have also affected the availability of RBT7 and if they could also change. FNZ have only provided a comparison between the drop in landings and associated effort in the JMA fishery and not considered other highly plausible causes for a reduction in availability due to oceanographic and environmental change. Figure 1 represents the decreasing catch trend in RBT7 coinciding with the increasing catch trend in RBT3 which may be due to the increasing catches over 1 tonne in the Southern Ocean.



Fishing Year Figure 1. Catch landing against TACCs for RBT3 and RBT7. (Source FNZ Plenary 2021)

- 17. Information was sought from FNZ regarding spatial spread and nature of catches of RBT3. Note that since 2021-11, 88-90% of all redbait catches have been taken by midwater trawl, the majority in target JMA, SQU and BAR fisheries. These fisheries have been highly observed over the period.
- 18. The number of RBT3 catches (from estimated catch reports) of greater than 1 tonne per tow has fluctuated without trend on the Chatham Rise but there has been an increasing trend in the southern squid fishery (Snares and Auckland Islands) with a six-fold increase since 2010. While total midwater effort fluctuates in terms of those three target fisheries in FMA5 and SQU6T it does so without obvious trend.
- 19. Fishers report an increasing need to avoid RBT3 in various fisheries due to an expectation now that the TACC will be inadvertently breached and deemed values apply. In fisheries of high volume but low value such as BAR deemed value costs are a significant concern and can lead to avoidance (as they are designed to do). This avoidance is reported to be increasing as over \$500k in deemed values for RBT3 has been paid since 2013-14. In addition to RBT3 avoidance, fishers are also having to either avoid or return KIN3 under Schedule 6 to also avoid incurring significant deemed values.
- 20. If the TACC is changed to the levels proposed by FNZ and the abundance does return more quickly than expected (i.e., as quickly as it "disappeared"), which can be a factor in stocks that are reasonably short lived, then significant deemed values will be incurred. The factors affecting the RBT3 fishery that is currently incurring significant deemed values needs to be reviewed for what may be influencing the higher abundance levels exhibited in that fishery, especially in the southern part of the RBT3 QMA (FMAs 5 and 6).
- 21. The information provided on ageing is inconclusive. If co-related stocks of redbait (same species) found in Australia (Tasmania and Victoria) has a determined average estimated maximum age of about 9 years at a length of about 320mm, it does not make sense that the New Zealand maximum size of 420mm could have an assumed maximum age of 90 years based on the

relationship with rubyfish, another species of *Emmelichthys*, that has had its ageing assessed using carbon dating and bomb isotopes. There is no evidence provided by FNZ to this hypothesis, merely an observation that they are in the same *Family (Emmelichthyidae)*. The depth profile of the juvenile and adult life phases of RBT to RBY vary with RBY adults being found beyond 500m which is the maximum distribution depth for RBT.

22. Figure 2 provides a plot of observer sampling of RBT3 and RBT7 from midwater trawling and then summarised by year. Mean and modal lengths were plotted for the past 15 years and shows that the maximum measured size in the commercial catch is at approximately 360mm being well below the 420mm noted by FNZ. It is unclear when the measurement of 420mm was taken and if it related to the same timeframe as that plotted. If FNZ are to review stocks then the most recent data should be accessed and reviewed. The data clearly shows that the maximum measured length is in the same range as Australian aged redbait and therefore should therefore be related to the relevant determined age and not related to rubyfish.

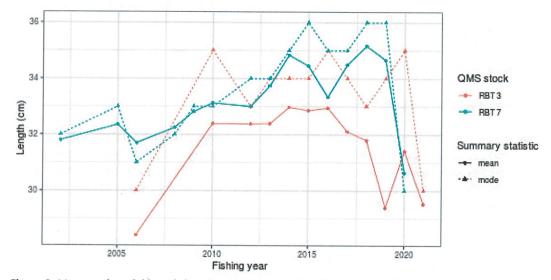


Figure 2. Mean and modal length for observer samples of redbait from midwater trawl fisheries, by stock and year. (Source Pisces Research Ltd 2022 from FNZ approved data release)

- 23. The spawning locations of redbait are also undetermined as is the likelihood that redbait may have followed planktonic crustaceans, cephalopods, shrimp and small fish (being dependent on redbait size) on the oceanic currents and changing oceanic temperature profiles.
- 24. We believe that there are influences from the warmer water at the surface from the oceanic heatwaves that have been evident in recent years that may be influencing the North South migration of RBT7 seeking the preferred colder water temperatures between 10-16° C. With the temperature influences moving into Southland, they may also be influenced by the Sub-Antarctic and Southland currents into RBT3. The sharp drop in apparent abundance (landings) in RBT7 occurs at the same time as a threefold increase in heatwave anomalies. This is hypothetical, but ecologically logical) influences from water temperature climes can have an effect.

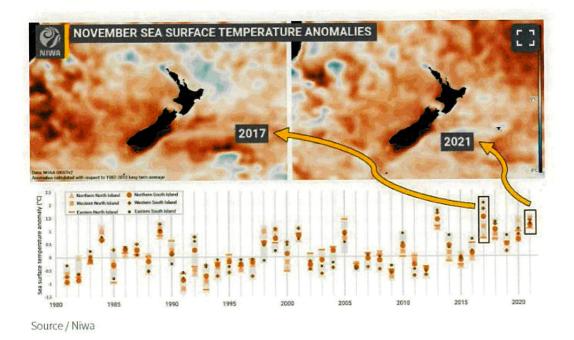


Figure 3. November (only) Sea Surface temperature profile

25. Concurrent with the potential changes with RBT7 being influenced by warmer waters, the accepted changes in the movement of KIN7 and KIN8 and increasing catch throughout the west coast and into Foveaux Strait/Southland has been evident for a number of years now, as has the increasing abundance of KIN3 on the East Coast South Island. The Plenary chapter for KIN notes this may be attributed to "regime shift".

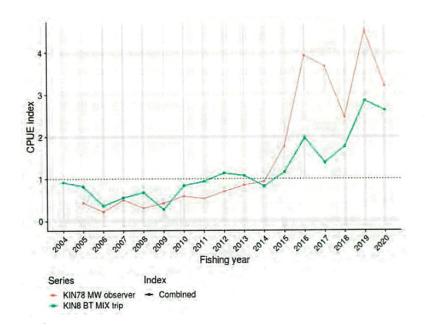


Figure 4. CPUE indices for the west coast North and South Island kingfish fisheries. (Source KIN7&8 rapid CPUE update to FNZ working group)

26. There needs to be more analysis of the oceanographic and planktonic conditions that influence RBT7 before the TACC is considered to be reduced. Some of this information may already be available through the NIWA portals but also further temperature profile data is being gathered under the MetOcean Moana Project. The temperature profile information relates to a number of fishstocks throughout New Zealand and should possibly be part of some analyses whereby temperature influences stock biology and movement. Movement and mixing of KIN needs to be given more contextual consideration within related fisheries such as RBT.

- 27. Whilst there is uncertainty on the status of the RBT7 stock with the many factors influencing catch levels, it is also unclear what the outcome of the current fisheries reforms will have (e.g., cost recovery, management framework etc) on how we operate and what management framework FNZ have for such stocks.
- 28. We would recommend that in order not to unduly impose significant costs on RBT7 quota owners is to not include the stock in the levy model for the inshore trawl surveys for the west and east coast South Island. Stocks where the catch is significantly low and not providing economic return should not have a levy placed upon them until such a time the catch can support the levy provision. Southern Inshore have undertaken not to levy shareholders for stocks that are significantly under-caught on this basis.
- 29. Should FNZ reduce the TACC for RBT7 any levy accrual will have to be carried over onto other stocks, imposing more unwarranted costs on them.
- 30. With the lack of evidence to a sustainability risk to RBT7 we request that the **Status Quo be maintained** until further scientific evidence for ageing, productivity, oceanographic influences and a characterisation of RBT7 with associated redbait stocks and target fisheries where it is caught as a bycatch.
- 31. This proposed additional evidence need not apply just to RBT7 but to all stocks that are considered for TACC reductions. This paper has a paucity of information and makes assumptions without additional reasoning, comparison and characterisation of data held by FNZ.

REVIEW OF HAPUKU/BASS

- 32. Fisheries New Zealand yet again propose to decrease the TACCs for stocks with a paucity of information. Whilst the Plenary may state "that it is unknown whether the current TACC is sustainable" it merely means that in this instance there is insufficient information to determine the status of stock. It does not provide reasoning to arbitrarily reduce the TACC for HPB7 and HPB8 based on just catch levels from a reduction of commercial effort and potential increased recreational catch.
- 33. The consultation document states; "HPB stocks are low knowledge stocks with no reliable estimates of biomass or yield" yet determines that "FNZ considers that waiting on further research and delaying management action would be detrimental to stock sustainability".
- 34. FNZ propose that the options to decrease TACCs to current catch levels are consistent with the objective of maintaining the stock at or above, or moving the stock towards or above, a level that can produce the maximum sustainable yield. The fact is that MSY is not know and again not knowing is not sufficient reasoning to reduce TACCs when catch effort has been identified as a contributing factor in the reduction of landings.
- 35. Increased compliance costs from both MNZ and MPI, electronic reporting, poor port price and increased expenses all contribute as being serious reasons for any reduction in catch. There are simply less boats. Add to this an increase across the board in recreational numbers and it is not difficult to see where any problem lays.
- 36. The recreational sector will decimate this fishery just like they did Blue Cod and no-one in Government will accept the truth preferring to cut commercial quotas and ignore putting in place urgently, regulations that stop this slaughter. This is a travesty and proves that MPI have no

interest in managing fisheries. They prefer to satisfy the political imperative that also ignores effective management.

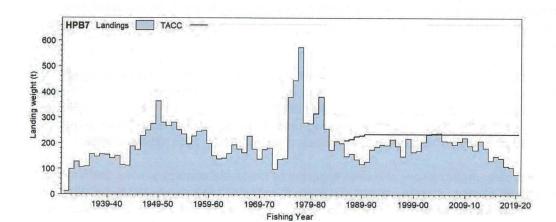
- 37. FNZ ran a series of meetings to discuss the status of the HPB stocks and their conclusions within this consultation document are largely based on anecdotal information provided from them. Such meetings are acceptable if the group are presented with adequate science and analyses for decision-making. Anecdotal information can be initially informative but final decision-making on reducing TACCs is unacceptable.
- 38. Reference is also made by FNZ on the decision by the Minister to reduce the TACCs in HPB 1 and HPB2 last year because of a downward trend in those fisheries and that similarly the review of HPB7 and HPB8 should be initiated on that same basis. Simply looking at downward trends in catch is not a basis to initiate a review of a TACC, this is a myopic approach by FNZ.
- 39. There is a current project (HPB2021-01) that is looking at designing a Longline survey to produce age-structure and mortality estimates, which involves fishery characterisation using high resolution data from ER and involves extensive interviews with fishers. The review process should include the most recent information from this survey with a science-based decision.

Hapuku/Bass 7 (HPB7)

40. Southern Inshore do not agree with the reduction to the TACC for HPB7.

- 41. Not dissimilar to RBT7, FNZ are using the reasoning used in the Plenary that if it is not known if current catches or TACCs are sustainable that the TACC levels should be reduced to support MSY. The MSY for HPB7 is not known but that does not justify reducing the TACC when catches have been traditionally caught but now experience reduced catch effort due to a number of factors.
- 42. We understand there are current attempts at developing appropriate models for the assessment of HPB to assess the status of the stock, that does not at this premature stage, provide justification to reduce the TACC. Nor does the anecdotal information provided by the sectors through the meetings held. Just because a fisher (recreational, customary or commercial) is unable to catch HPB does not mean there is an abundance issue.
- 43. Landings may be down in recent years in some fisheries where HPB is a bycatch but FNZ has not provided the characterisation of those fisheries and thereby providing the evidence needed to propose such TACC reductions. E.g., a fisher that is not catching as much HPB in with their SCH does not necessitate a reduction in the TACC of HPB. There are a number of factors that may be impacting the bycatch level of HPB when at the same time the level of SCH can remain at an appropriate level.
- 44. FNZ recognised that the reasons for decreasing effort are likely complex but yet they did not fully analyse and present those results through a characterisation of various core fishers' activities. Some fishers noted the change in maritime licensing which would have indicated that they are restricted to travelling some distance offshore but again this could have been characterised by reflecting the number of vessels that would have fished the outer extent of the EEZ and the level of HPB7 (and HPB8) that now not targeted. FNZ has not done any due diligence to fully assess and characterise the fishery and present science-based options.
- 45. FNZ propose to reduce the HPB7 TACC under both options by significant levels. For HPB7 the reduction is inconsistent as compared to the reasoning for HPB8. For the latter FNZ propose a reduction based on average catch for the past years but for HPB7 it is based on current catch. If the same average catch basis was used for HPB7 then the TACC should only be reduced to 175 tonnes based on the last 20-year average. FNZ should not be using inconsistent approaches to TACC assessment where the catch characteristics are so similar.

46. Catch reductions in HPB7 have to be considered alongside the shift in effort of fishers from setnet to longline and some to Dahn line. Consideration has not been modelled against the increasing recreational catch and effort beyond the Marlborough Sounds for example where their ability to travel further distances offshore may also have had an impact on available HPB grounds traditionally fished by the commercial sector. Also, consideration has not been given to the bycatch of HPB7 to BNS7. Significant reductions (unwarranted in the latter reductions) have been made to the TACC for BNS7 to the extent that it has become uneconomical for vessels to travel to the outer extent of the EEZ to fish for BNS7 (when ACE is available at the reduced TACC. This reduction in effort will have also meant a reduction in catch of associated species such as HPB7. This too has not been characterised. See Figure 1 for the comparative reduction of HPB7 to BNS7 catches over the same period.



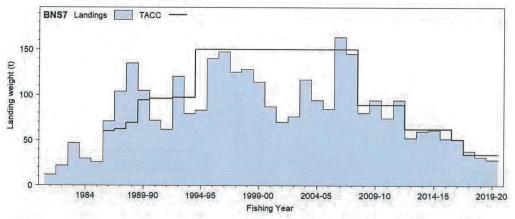


Figure 1. Catch landings against TACCs for HPB7 and BNS7. (Source FNZ Plenary 2021)

- 47. The consultation paper recognises that the downwards trend in landings could be driven by decreased effort by commercial fishers targeting HPB7 and also may be transferring effort to more lucrative species, such as CRA. Given this is a real consideration then FNZ should have characterised this and presented it within the paper. Access to this information is not readily available to submitters.
- 48. Given the environmental changes being observed physically and within other stocks, such as RBT7 and KIN7&8 it is not inconceivable that these factors may also be impacting the availability of HPB7 as well as HPB8.

Deemed value HPB7

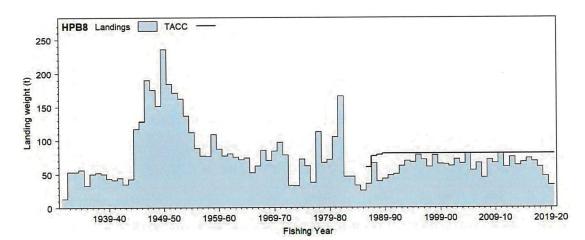
49. Aligning the deemed value for HPB7 on the basis that it is adjacent to HPB2 and HPB8 and unjustified evidence on supposed misreporting potential is not an appropriate framework for changing deemed value rates.

- 50. We recognise that the proposal is to drop the annual deemed value rate from \$2.83 to \$2.52 but we prefer that the deemed value rate remains at the higher level, providing more incentive not to misreport.
- 51. Catch effort is at a lower level because of the factors identified rather than any sustainability concern, and it's likely that this should be enhancing the stock abundance. Should the landings increase the higher deemed value is most appropriate and consistent with ACE and port price.

Hapuku/Bass 8 (HPB8)

52. Southern Inshore <u>do not agree</u> with the reduction to the TACC for HPB8.

- 53. The argument not to reduce the TACC for HPB8 is the same as for HPB7. To base a decision to reduce a TACC based simply on the lack of catch landing is not an appropriate metric to measure sustainability of a stock.
- 54. Consideration has not been given to the avoidance of other species such as snapper in QMA8 which may have also impacted the catch of HPB8. Not dissimilar to HPB7, the reduction in the TACC for BNS8 matches the reduction in catch for HPB8. Characterisation of the catch of HPB8 to BNS8 should show that the stocks are caught together also at the extremities of QMA8 to the outer EEZ limit. Figure 2 shows the concurrent reduction in catch for both HPB8 and BNS8.
- 55. The catch profiles in QMA8 have also been impacted by the spatial closures to Maui dolphins and the movement of catch effort to other areas. These too should have been characterised along with the stocks within QMA8.



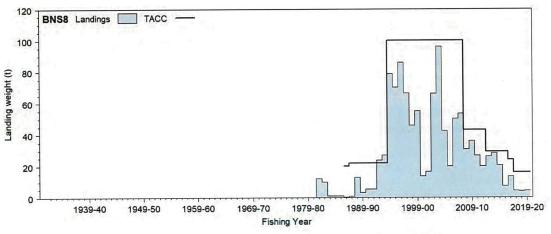


Figure 2. Catch landings against TACCs for HPB8 and BNS8. (Source FNZ Plenary 2021)

Deemed value HPB8

- 56. Aligning the deemed value for HPB8 on the basis that it is adjacent to HPB2 and HPB7 and unjustified evidence on supposed misreporting potential is not an appropriate framework for changing deemed value rates. Electronic reporting is in place and monitoring vessel movements so misreporting catch is unlikely.
- 57. We recognise that the proposal is to raise the annual deemed value rate from \$2.18 to \$2.52 but we prefer that the deemed value rate remains at the lower level on the basis that no sustainability concern has been identified nor concern that misreporting within the Cook Strait area is evident.
- 58. Catch effort is at a lower level because of the factors identified other than sustainability concern, and this should be enhancing the stock abundance. Should the landings increase the lower deemed value is most appropriate and consistent with ACE and port price.

SUMMARY

- 59. Southern Inshore do not agree with the reduction of the TACCs for RBT7, HPB7 and HPB8 on the basis that it is inappropriate to simply review a TACC because the catch in that fishery has declined. TACC reviews need to be based on scientific evidence. In respect of HPB7 and HPB8 that evidence should come from the current design proposal for a longline survey for HPB.
- 60. We do not agree with the alignment of deemed values for all associated HPB stocks. There are regional variances in catch and abundance in the HPB stocks along with port price and ACE value.
- 61. RBT7 should also not be reviewed given the lack of information and analyses provided by FNZ. Southern Inshore and DWG have provided additional information that should have been considered by FNZ in the consultation document. This needs to be taken into account.
- 62. If FNZ are to review any TACC, up or down, there needs to be appropriate information and analyses provided for consideration by submitters. In this April sustainability review round has shown FNZ has been deficient in providing this information.



27 January 2022

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

By email: FMSubmissions@mpi.govt.nz

To whom it may concern,

DWG Submission on the DWG Submission on Review of sustainability measures for southern blue whiting (SBW 6B) for Apr 2022

Summary

- Deepwater Group Limited (DWG) SBW 6B quota owners submit in support of Fisheries New Zealand's (FNZ) proposed status quo option (Option 1), to keep the SBW6B TACC at 2,830 t for 2022-23
- DWG SBW6B quota owners, note the limited industry catch effort in SBW6B over the last 10 years, but further note that this lack of catch effort is not necessarily an artefact of a lack of fish, rather it is an artefact of the application of catch effort to other fisheries which provide better CPUE (e.g., HOK and SBW6I)
- DWG notes the difficulty in recent years to monitor spawning stock abundance and apply the harvest
 control rule due over the last 4 years, due primarily to the inability to undertake a successful acoustic
 survey but submits again that the drivers were operationally based (e.g., timing and COVID) and not an
 artefact of a lack of surveyable fish. DWG proposes that a survey to provide an estimate of current
 biomass be undertaken this year.
- DWG notes that other than low catch levels, there is insufficient evidence to support a TACC reduction, especially since the signs are positive and not negative (indications of new recruitment, work to update the HCR to allow for allows for gaps in acoustic survey results, the ability to undertake an acoustic survey in the coming year and the opportunity to update the MSE with additional analysis of existing data to provide an assessment of stock status using a proxy for MSY (e.g., MCY or MAY).

Introduction

- The Deepwater Group Ltd (DWG) provides this submission to Fisheries New Zealand (FNZ) on behalf
 of the quota owners of SBW 6B, 87.9% of which is owned by our shareholders.
- DWG is a non-profit organisation that works in partnership with Fisheries New Zealand and others to
 ensure deep water fishing is sustainable and that New Zealand gains the maximum long-term benefits
 from these fisheries resources.
- Our vision is to be trusted as the best managed deepwater fisheries in the world.
- DWG supports the aligned submissions of Te Ohu Kaimoana, Fisheries Inshore New Zealand (FINZ) and Southern Inshore Fisheries Management Company (SIFMC).



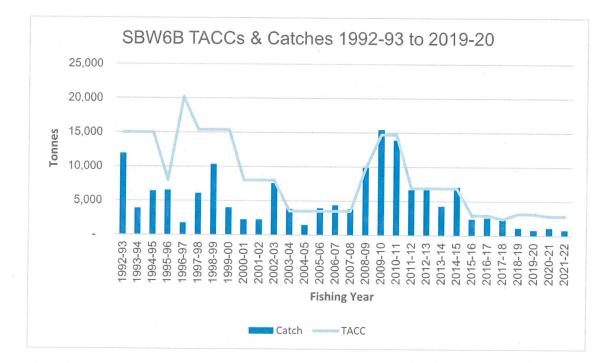
SBW 6B (Bounty Plateau)

SBW 6B (Bounty Plateau) is characterised by highly variable recruitment, with the fishery being punctuated by infrequent large year classes some years (e.g., 2002, 2007 and 2012) that sustain the fishery for many years, including subsequent years where recruitment is low.

Management of the fishery in terms of catch limits rests entirely on acoustic data feeding into an assessment and a harvest level being developed from this. Due to the inability to obtain adequate acoustic data in 2018 and 2019 the TACC was reduced by 10% for 2020 (from 3145 t to 2830 t). This reduction was supported by DWG Shareholders.

The SBW 6B Bounty fishery monitoring and assessment process has been ongoing for several years with NIWA providing support to surveys (e.g., echosounder calibration) and undertaking data analysis and assessment.

As in previous years, in 2020 and 2021 the vessel on station to undertake an acoustic survey of spawning aggregation(s) at Bounty was unable to obtain a robust snapshot that aligned with prescribed protocols and method.



The TACC has not been taken in the last three years (Figure 1 below).

Figure 1: SBW6B Catches (blue bars) against TACC (light blue line) from 1992-93 to 2019-21

The fishery has operated for many years dependent on very strong year classes especially 2002 and 2007 but also 2012. Since then, length-frequency data has shown a hint of emerging recruitment of 20 cm fish in 2019. This indication of recruitment reappeared in 2021 as a pulse of 30cm fish).

The southern blue whiting fishery (including from SBW 6B) is Marne Stewardship Council certified.



SBW6B Sustainability Options 2022-23

The Sustainability Review document for SBW6B provides three TACC options for southern blue whiting (SBW 6B) from 1 April 2022:

Option 1: 2,830 t (status quo) Option 2: 2,264 t (TACC reduction 566 t) Option 3: 1,981 t (TACC reduction 849 t)

The justification for these changes is based on there being no significant recruitment into the fishery since 2012, with indications that the fishery had relied to date on the strong 2002-year class (comprised 40% of the commercial catch proportion-at-age in 2020).

It is noted at paragraph 34 of the FNZ consultation document that "FNZ is proposing a reduction in the SBW 6B TAC as a cautious response to the best available information to ensure the ongoing sustainability of the Bounty Platform southern blue whiting stock."

DWG notes that a 10% reduction in the TACC as a cautious response was undertaken in 2020. Surely, the next one needs to be based on the best available information?

DWG Submissions: SBW6B Sustainability Options 2022-23

DWG submits in support of Fisheries New Zealand's (FNZ) proposed status quo option (Option 1), to keep the SBW6B TACC at 2,830 t for 2022-23

It is noted that in 2020 the SBW6B fish stock (as a result of no evidence of recruitment of a strong year class since 2012) saw a DWG supported TACC reduction of 10% for the 1 April 2020 fishing year.

Other than catches below the TACC over the past 4 years (see Figure 1), there is not sufficient evidence suggestive of a sustainability risk that supports the need to further decrease the TACC by 20% (Option 2) or 30% (Option 3).

Therefore, it is submitted that a further reduction of the TACC for the 1 April 2022 fishing year is not required.

To this end DWG notes:

- The completion of a management strategy evaluation for SBW 6B in December 2016 and notes the
 opportunity to update this evaluation with additional analysis of existing data to provide an assessment
 of stock status using a proxy for MSY (e.g., MCY or MAY). Outputs of this assessment would provide
 requisite information that could assist in making future management decisions and indeed provide some
 information that might support a TACC review. DWG notes that to date no further analysis has been
 completed.
- That the reliance on the application of a Harvest Control Rule (HCR) which estimates the annual sustainable yield based on the biomass estimate from the acoustic survey, and the difficulty of ensuring an acoustic survey on an annual basis is able to support that application. DWG notes the work currently underway on a proposed Harvest Control Rule for SBW6B that can be expressly applied notwithstanding gaps in acoustic survey results (e.g., the estimation/evaluation of risk as a quantity independent of B₀, driven by the relative changes in TACC).
- The limited industry catch effort in SBW6B over the last 10 years, but further note that this lack of catch effort is not necessarily an artefact of a lack of fish, rather it is an artefact of the application of catch effort to other fisheries (e.g., HOK and SBW6I which provide better CPUE).
- The difficulty in recent years to monitor spawning stock abundance and apply the harvest control rule, due primarily to the inability to undertake a successful acoustic survey; but submits that the drivers were operationally based (e.g., timing and COVID) and again not an artefact of a lack of surveyable fish.
 DWG proposes that before any further reductions to the TACC are made, a survey to provide an



estimate of current biomass be undertaken that incorporates a longer survey duration to better ensure the measurement of spawning aggregations in order to establish abundance with more certainty.

- The appearance of a recruitment pulse of three-year-old fish in the fishery (2021). It is noted that it is not common to see pre-recruits like this, and as such could be suggestive of a decent year class coming through (notwithstanding the catch was limited (1,100 t) and that only a few individuals were sampled).
- It is clear that more sampling is needed. Not only is a larger catch sample needed, in addition to the
 recording of length/frequency data, otoliths need to be taken. These otoliths can then be aged with
 otoliths collected from previous surveys, to provide a better information base to inform management.

DWG notes that other than low catch levels, there is insufficient evidence to support a TACC reduction at this time, especially since rather than being negative, signs are positive (indications of new recruitment, work to update the HCR to allow for allows for gaps in acoustic survey results, the ability to undertake an acoustic survey in the coming year and the opportunity to update the MSE with additional analysis of existing data to provide an assessment of stock status using a proxy for MSY (e.g., MCY or MAY).

It is DWG's submission that change to the SBW6B TACC must be based on the best available information, noting that there is ample opportunity to improve that information base with the work that is able to be and is currently being undertaken, and the fact that a precautionary reduction has already been implement in April 2020.¹

Further Engagement

DWG 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 the SBW6B (Bounty Plateau), should it be beneficial.

Regards,

Aaron Irving Deputy Chief Executive Deepwater Group Ltd



8th February 2022

2021 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 – April 2022 round

Introduction

- Sealord Group Limited (Sealord) welcomes the opportunity to provide comments on the Fisheries New Zealand (FNZ) consultation documents for *Review of sustainability measures for selected fish stocks – April 2022 round* (Consultation Documents). Sealord supports effective science-based management to ensure ongoing sustainability and utilisation of fisheries resources.
- 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 Consultation Documents which relate these fisheries (RBT7 and SBW6B)
- 5. Sealord has reviewed, and supports, the submissions in relation to the Consultation Documents made by each of Deepwater Group, Fisheries Inshore New Zealand and Te Ohu Kaimoana.



Feedback on Consultation Paper

Redbait (RBT7)

- 6. Sealord supports Option 1 (status quo) proposed by FNZ.
- 7. As noted in the Consultation Document there is no information about stock structure or recruitment patterns and no estimates of fishery parameters, abundance, biomass, or yield estimates for redbait fishstocks. Further, there is no indication that redbait abundance is related to fishing effort in the fisheries within which redbait is caught as bycatch.
- 8. Redbait is a mobile pelagic species and there is evidence that their distribution may be affected by climatic changes. Catch data from the eastern FMAs show a change in distribution toward the south of their known range. The apparent decrease in RBT7 abundance, coinciding with increased catch per unit effort in FMAs 5 and 6, suggest a possible poleward migration in the western range. Recent marine heatwaves in the Tasman Sea may be triggering short term unfavourable conditions in the Challenger region forcing southward movement down the west of New Zealand.
- 9. As well as offering a plausible explanation for recent RBT7 catches lower in the last 10 years than the previous 10, a southward change in distribution also suggests either that redbait is a single stock or has a high degree of interconnectivity. Reduced abundance in the north of the range in this scenario is not a sign of declining stock but of adaption to climate change.
- 10. Redbait in the Challenger area (RBT7) is exclusively caught as bycatch in the western hoki and pelagic fisheries. The Consultation Document notes that none of the proposed options will constrain these target fisheries. The corollary then is that neither will they change the volume of redbait bycatch.
- 11. Sealord notes that imposing a low TACC on a bycatch species, without the intention to constrain effort, results in the perverse outcome of changing behaviour and penalising fishing companies (deemed value) only when the species biomass within an FMA begins to increase.
- 12. The decreasing proportion of RBT7 in JMA7 catches is an area of concern, though whether it is an indication of a declining population, or an indicator of climate impacts, remains unknown. Sealord proposes that rather than ineffectual TACC reductions, further monitoring and research is required to understand the reason(s) for the changes.



Southern blue whiting (SBW6B)

- 13. Sealord supports Option 1 (status quo) proposed in the Consultation Document.
- 14. The Bounty southern blue whiting spawn fishery has a highly variable biomass and stock structure due to the characteristic of recruitment by infrequent strong year classes. The commercial fishing effort is also variable, given that this is a remote fishery so vessel managers will only send vessels when there is confidence in the abundance of the spawning population. The seasonal timing of the Bounty spawning between the end of the hoki season and Campbell Islands southern blue whiting also influences whether fishing companies will decide to put effort into SBW6B. For these reasons, catch volume or fishing effort are not useful indicators of spawning stock abundance.
- 15. For the reasons outlined above, it is unlikely that ACE and quota owners will allocate effort to catch the TACC of 2,888 tonnes until the 2019 year class fully recruits to the spawning stock. This is a feature of this fishery and not a reason to reduce the TACC below its current historically lowest level.
- 16. Contrary to what is stated in paragraph 4 of the Consultation Document, the best available information on this fishery is the 2021 fishery observer data. Length and age frequency data indicate that the 2019 year class has begun to recruit to the spawning population as three year olds. It is rare for three-year-old fish to be this prominent in the fishery and suggests that this is a very strong year class. Figure three in the Consultation Document shows that this has only happened once in recent years the 2002 year class is the strongest on record and is still prominent in catches 20 years later.
- 17. The Consultation Paper notes that that there has been no significant recruitment in the fishery since the 2012 year class. This seven-year gap between 2012 and the rising 2019 class is not abnormal in this fishery and has parallels with the eight-year gap prior to the dominant 2002 year class.

Yours faithfully

SEALORD GROUP LTD

Doug Paulin

Chief Executive Officer



ENVIRONMENT AND CONSERVATION ORGANISATIONS OF NZ INC.

*'ebsite: www.eco.org.nz

Sustainability Review 2022, Fisheries Management, Fisheries New Zealand, PO BOX 2526, Wellington 6140. By email: <u>FMSubmissions@mpi.govt.nz</u>

8 February 2022

Review of rock lobster sustainability measures - 2022 April

The Environment and Conservation Organisations of NZ (ECO) is the national alliance of 48 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;
- The absence of observers or cameras on inshore vessels undermines the management and monitoring regime in place.
- 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.
- Rock lobster is an important shared fishery and an important part of the inshore ecosystem.

ECO welcomes the development of stock assessments for rock lobster stocks and species. ECO has generic concerns over the trends in catch rates and biomass in the red rock lobster stocks and the small stock size of the vulnerable biomass in most of the stocks being reviewed.

So far there is no agreed stock targets for rock lobster and the current harvest strategy is nearly 10 years past its review date. A precautionary approach must be taken with catch limits.

2. Summary Submissions

Below is a summary of ECO Submission on the Review of rock lobster sustainability measures – 2022 April.

Catch limit changes proposed Red Rock Lobster A. CRA 1 Northland

ECO supports a catch-reduction in CRA 1 and option 1.4.

B. CRA 7 and 8

ECO supports the status quo catch for both CRA 7 and 8.

Yours sincerely,

Barry Weeber ECO Co-Chairperson

Consultation Proposals

In addition to our general submissions above which are relevant to all the proposals, we make the following specific recommendations.

Harvest Strategy

Separate harvest control rules and limit and target reference points have yet to be adopted for either rock lobster species. The current harvest strategy and Fisheries NZ approach is overly focused on the 20% "soft limit".

ECO considers it is time the Harvest Strategy was reviewed and made more ecosystem focused. In most cases the proposals use the default provisions in the harvest strategy.

The strategy still refers to old default soft and hard limits that do not meeting international best practice. For example, the hard limits are half the level used in Australia where targeted fishing for a species must stop.

The biomass targets are well below the practice used in CCAMLR for predator species (50%Bo) and prey species of (75%Bo). The NZ Harvest Strategy itself notes that "it is becoming increasingly difficult to justify stock targets less than 30-40% Bo (or, equivalently, removing more than 60-70% of the unfished biomass)."¹

For example ECO notes that the Worm et al (2009)² 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)³ 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.

¹ Footnote 6 – Ministry of Fisheries (2008) Harvest Strategy Standard for NZ Fisheries. October 2008. 25p.

² Worm B, Hilborn R, Baum JK, Branch TA, Collie JS, et al. (2009) Rebuilding global fisheries. Science 325: 578–585

³ 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.

Larger stock sizes are also recommended in a recent review by Pauly and Froest $(2020)^4$ 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, 2013^5)."

A key question for rock lobster stocks is how to treat vulnerable biomass and what the target should be, it surely shouldn't be to keep the vulnerable biomass below 20%. A precautionary approach also supports larger stock sizes.

Ecological Role and other considerations

Larger stock sizes have been recommended for resilience to climate change, increased "blue" carbon sequestration, and reducing the carbon footprint of the fishing industry. ECO notes that the rock lobster fishery has on average the highest carbon footprint of 4,731 litres per tonne of diesel per tonne of or 12.49 tonnes of carbon dioxide per tonnes of rock lobster caught (Hilborn and Tillier 2012)⁶.

An additional consideration is the ecological importance of rock lobster. For example, Kina barrens are created by over-fishing kina predators like snapper and rock lobster to low levels (Shears & Babcock, 2002⁷, Babcock et al 2010). Kina eat kelp and kina grazing creates and maintains urchin barrens and prevents kelp re-establishing, especially in North-Eastern New Zealand.

Research in North-Eastern New Zealand has found that when rock lobster and snapper are in high enough densities there is a positive effect on kelp forests and primary productivity as they consume kina (Shears and Babcock, 2002). In contrast urchin barrens are less prevalent in marine reserves where there are higher densities of kina predators eg rock lobster and snapper

⁴ Pauly, D. and Froese, R. (2020) MSY needs no epitaph—but it was abused. – ICES Journal of Marine Science, doi:10.1093/icesjms/fsaa224

⁵ 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.

⁶ Hilborn R and Tellier P (2012) The Environmental Cost of New Zealand Food Production. Seafood Industry Council. 32p

⁷ Shears, N.T., Babcock, R.C., 2002. Marine reserves demonstrate top-down control of community structure on temperate reefs. Oecologia 132: 131,142

(Babcock et al 1999⁸, Shears and Babcock 2002, Babcock et al 2010⁹). Similar situations have been noted with sea urchins globally (Ling et al 2015¹⁰).

There are clearly knowledge gaps when looking at the wider ecological role of lobsters marine ecosystems as identified by Phillips et al $(2013)^{11}$.

Stock Specific Comments

In addition to the general comments about rock lobster ECO makes additional comments below:

Species/Area	Change Proposed	Proposal summary	ECO Supporting Submissions
A. CRA 1 Northland	- Or ↓	Option 1.1: Status Option 1.2: Decrease the TAC by 5% Option 1.3: Decrease the TAC by 9% Option 1.4: Decrease the TAC by 12%	 ECO supports a catch-reduction in CRA 1 and option 1.4. The previous cut in CRA1 fishery has only flattened the stock and shown little overall change. The current rapid assessment indicates a number of issues of concern: The current vulnerable biomass is very low (under 20% - Median of 14.6%) and the current projection shows only a small increase at current catches to 2025 (15.8% median) but the uncertainty is greater "with a range of 9.2% (or 0.092) and 26.8% (or 0.268) of unfished levels (5% and 95% quantiles)." Female spawning biomass is only 36% of unfished levels. The option 1.4 is the only option which would see an increase in the median the vulnerable biomass with a greater probability of getting to 20%. This would improve the ability of rock lobster to plays its ecological role in the northern coastal ecosystem.
CRA 7 and 8		CRA 7:	ECO supports the Status quo catch.

⁸ Babcock RC, Kelly S, Shears NT, Walker JW, Willis TJ (1999) Changes in community structure in temperate marine reserves. Mar Ecol Prog Ser 189:125–134.

⁹ Babcock RC, Shears NT, Alcala AC, Barrett NS, Edgar GJ, Lafferty KD, et al. 2010. Decadal trends in marine reserves reveal differential rates of change in direct and indirect effects. Proceedings of the National Academy of Sciences of the USA 107: 1825618261.

 ¹⁰ Ling SD et al. 2015 Global regime shift dynamics of catastrophic sea urchin overgrazing. Phil. Trans.
 R. Soc. B 370: 20130269. http://dx.doi.org/10.1098/rstb.2013.0269

¹¹ Phillips B F R, R A Wahle and T J Ward (2013) Lobsters as Part of Marine Ecosystems – A Review. In Lobsters: Biology, Management, Aquaculture and Fisheries, Second Edition. Edited by Bruce F. Phillips. 2006, 2013 John Wiley & Sons, Ltd. Published 2013 by John Wiley & Sons, Ltd

Species/Area	Change Proposed	Proposal summary	ECO Supporting Submissions
	Proposed	Summary Option 7.1: Status quo Option 7.2: Increase the TAC by 16%	 This is a new assessment based on new assumptions on the split of the stock between parts of CRA7 and 8. Much of the assessment is based on a combined assessment of the two areas with assumptions on the vulnerable biomass, the stock the fish size is applied to, and the overall trends in biomass. The combined assessment only just exceeds the reference level. Any catch increase should be compared against the
			stocks assessed not the combined stocks which is not a precautionary approach. This is due to the risk of any increase affecting the stock differently.ECO is also concerned at the small size of crayfish taken in the concession fishery in CRA 7.
		CRA 8: Option 8.1: Status quo Option 8.2: Increase the TAC by 9% Option 8.3: Increase the TAC by 11%	ECO supports the Status quo catch. (see our comments on CRA 7).



1

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

By Email: FMSubmissions@mpi.govt.nz

8 February 2022

SUBMITTER DETAILS

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Review of Sustainability Measures for Selected Fish Stocks – April 2022 Round RE: New Zealand Scallop (SCA 1 and SCA CS)

1. Introduction

- 1.1. This is a submission on the review of sustainability measures for wild fish stocks for 2022/23 (April round). This submission specifically addresses the proposals for the Northland (SCA 1) and Coromandel (SCA CS) scallop fisheries, as set out in the Fisheries New Zealand Discussion Paper for New Zealand Scallop stocks (Discussion Paper).¹
- 1.2. The Environmental Defence Society (EDS) is an independent not-for-profit organisation conducting interdisciplinary policy research and litigation. It was established in 1971 with the purpose of improving environmental outcomes in Aotearoa New Zealand. EDS has a special interest in coastal and marine ecosystems and is currently leading research on future options for oceans system reform.
- 1.3. EDS is familiar with the range of complex matters that need to be addressed in fisheries management in Aotearoa New Zealand. In 2018 EDS published findings from a review of the fisheries management system in a report entitled "Voices from the sea: managing New Zealand's fisheries".² The findings of the Report were informed by national and international literature reviews; an economic analysis and review of stock assessment data for some key

¹ FNZ (2021) *"Review of Sustainability Measures for New Zealand scallops (SCA 1 & SCA CS) for 2022/23"* FNZ Discussion Paper No: 2021/30, December 2021. Available at: <u>www.mpi.govt.nz</u>.

² Peart, R. (2018) Voices from the Sea: Managing New Zealand's Fisheries (EDS, Auckland).

stocks; and more than 60 interviews with people closely involved in fisheries management. More recently, EDS submitted on proposals to temporarily close fishery areas to the harvest of taonga species and proposed sustainability measures for the management of wild fish stocks.³

2. Summary of submission

- 2.1. EDS requests that the Minister for Oceans and Fisheries (Minister) seeks advice to enable the setting of an adaptive management target and associated reference limits (i.e., hard and soft limits) for scallop stocks. In the absence of reference limits, it is unclear how the recovery of the northeastern scallop stocks will be tracked or evaluated, or when the stocks will be considered sufficiently "recovered" for the purposes of supporting fishing activities. EDS considers there is a risk the stocks will not be given sufficient time to rebuild unless cautious, evidence-based management reference levels are established.
- 2.2. The Discussion Paper does not include any information on the potential or actual adverse effects associated with the use of dredge fishing methods. EDS considers the omission of relevant information on this topic means the Minister's decision will not be based on the best available information and is not consistent with the information principles listed under s 10 of the Act. EDS requests that available information on this topic is included in advice to the Minister to enable an informed decision to be made in accordance with the requirements of the Act.
- 2.3. EDS supports Option 1 as a minimum requirement for the management of the northeastern scallop fisheries. However, EDS requests that the following additions are included in Option 1 to support the long-term sustainability of the stocks and the marine ecosystems they comprise:
 - (a) a requirement that northeastern scallop fisheries must not reopen until management reference limits have been set for the stocks based on the best available scientific information; and surveys have demonstrated that the stocks have recovered to a level that is capable of sustainably supporting fishing activity (as informed by the management reference limits).
 - (b) In the interim, the Total Allowable Catch (TAC), Total Allowable Commercial Catch (TACC) and other allowances should be set at zero until a suitable long-term management target and reference limits have been established and met.
 - (c) A permanent prohibition on the use of commercial and recreational dredge methods to harvest shellfish in the northeastern fisheries.
 - (d) Permanent area-based restrictions to protect important shellfish habitat within or near the Bay of Islands, Whangārei, Kawau Island, the Mercury Islands, the Far North

³ Copies of recent submissions prepared by EDS are available from <u>https://www.eds.org.nz.</u>

(Rangaunu Bay and Spirits Bay), Bream Bay, Great Barrier Island and the Bay of Plenty.

2.4. EDS supports aspects of Options 2 and 3, but considers the collective suite of proposals included under each of these options is not sufficient to protect scallop stocks from further decline, to support the recovery of the stocks, or to mitigate cumulative effects of past and present fishing activities on scallops or the wider marine environment. EDS considers the available information indicates that the continuation of harvest activities in the Northland or Coromandel fishery is not sustainable. Consequently, EDS requests a full closure of these stocks subject to the considerations outlined above.

3. Fisheries management context

Characteristics of the northeastern scallop fisheries

- 3.1. The Northland scallop fishery (SCA 1) encompasses coastal waters to the north of Reef Point (near Ahipara) on the west coast, running all the way around North Cape, and down to Cape Rodney (near Leigh) on the east coast. A small area of SCA 1 is located within the Hauraki Gulf Marine Park. The Coromandel scallop fishery (SCA CS) adjoins the southeast boundary of SCA 1 and extends south from Cape Rodney to Town Point (near Tauranga). The SCA CS fishery includes the majority of scallop beds located within the Hauraki Gulf Marine Park. Collectively, the two fisheries span the extent of the northeastern coastal bioregion (which includes northern waters on the west coast of Aotearoa New Zealand).⁴ For the purposes of this submission, the SCA 1 and SCA CS stocks are referred to as "northeastern scallops".
- 3.2. Historically, northeastern scallops have supported important commercial fisheries, although steep declines in biomass in recent years have reduced the viability of commercial harvest efforts and resulted in industry-led voluntary closures of previously targeted scallop beds.⁵ A strong recreational interest in scallop harvesting persists across suitable areas, with a focus on enclosed bays and harbours, which are closed to commercial fisheries.⁶ Northeastern scallops were traditionally an important food source for coastal hapū, but in recent years widespread declines in scallop biomass across shallow coastal areas have undermined the success of customary harvest practices. Due to concerns about the status of northeastern scallop populations, tangata whenua have placed rāhui over several coastal areas to support the recovery of nearshore beds.⁷ In some areas, on the request of tangata whenua, the Minister has imposed legally enforceable closures on scallop fisheries to support the rāhui.⁸

⁴ Based on a broad scale mapping classification scheme, see: Department of Conservation and Ministry of Fisheries (2011) Coastal marine habitats and marine protected areas in the New Zealand Territorial Sea: a broad scale gap analysis. Volume 1. Available at <u>www.doc.govt.nz</u>.

⁵ FNZ (2021) Fisheries Assessment Plenary, November 2021: stock assessments and stock status. Compiled by the Fisheries Science and Information Group, Fisheries New Zealand, Wellington, New Zealand. 663 p. See pages 484 (SCA 1) and 500 (SCA CS).
⁶ Ibid, page 475.

⁷ In 2017, Te Whanau Moana me Te Rorohuri placed a rāhui covering 384 ha at Maitai Bay, Karikari Peninsula. In 2021, Ngāti Pāoa placed a rāhui on the waters surrounding Waiheke Island; and Ngāti Hei placed a rāhui on waters extending along the east Coromandel coastline, including Opito Bay. Ngāti Pāoa and Ngāti Hei requested temporary closures to the harvest of scallops (and other taonga species), which were approved by the Minister. On 4 February 2022, Ngāti Manuhiri Settlement Trust signalled their intent to place a rāhui on the Hauraki Gulf on Waitangi Day (6 February 2022) to support the recovery of shellfish beds.

3.3. All commercial fishing of northeastern scallops is undertaken using box dredges, while recreational fishers harvest scallops by hand or using small dredges.⁹ A box dredge generally comprises a square steel frame covered in steel mesh, which rides on steel runners that keep the frame slightly off the seafloor.¹⁰ The dredge-seafloor interface consists of a bar fitted with steel prongs at regular intervals, and the prongs dislodge scallops (and other shellfish or marine biota) and flick these up into the meshed box as the dredge box is towed along the sea floor. The dredge is in contact with the seafloor for the duration of the tow. On hauling, the dredge is placed on a self-tipper which empties the contents into a sorting tray.

Management of the northeastern scallop fisheries

- 3.4. Current commercial fishing regulations set seasonal restrictions on the harvest of scallops, daily restrictions on the hours of harvest, and minimum size limits (of 90 to 100 mm).¹¹ In addition, there are restrictions on the design and size of shellfish dredges. A maximum dredge width of 2.5 m applies to single dredge methods, while a maximum width of 1.4 m applies if double dredge methods are used.¹² A maximum of two dredges may be used at any one time.¹³ Area-based closures to the commercial harvest of scallops apply in most enclosed bays, estuaries, and harbours.¹⁴
- 3.5. Current recreational fishing restrictions include a daily bag limit of 20 scallops per person, a minimum shell size limit of 100 mm, and seasonal closures.¹⁵ There do not appear to be any restrictions on the design or size of recreational shellfish dredges.
- 3.6. The Discussion Paper advises that there are no accepted management targets or limit reference points (i.e., soft or hard limits) for the northeastern scallop fisheries. Historically, the northeastern scallop fisheries have been managed by setting a "baseline" TAC, TACC and other allowances.¹⁶ Scallop populations are highly variable from year to year, and are listed on the Second Schedule of the Act. Consequently, the Minister can decide to increase the baseline TAC (and generate additional catch entitlement for commercial fisheries) within a fishing season to accommodate fluctuations in stock biomass, with the aim of producing the maximum sustainable yield (**MSY**) for a stock. All catch allowances revert back to baseline levels at the start of the next fishing year. There have been no in-season increases in catch allowances since 2006 and 2012 in the SCA 1 and SCA CS fisheries respectively.¹⁷

Status of northeastern scallop stocks

3.7. The latest surveys of northeastern scallops were undertaken in 2021. The Discussion Paper advises that there has been an overall decline in the biomass of northeastern scallops since

⁹ FNZ (2021), above n 1, at page 19.

¹⁰ This summary is based on Beentjes, M.P. and Baird, S.J. (2004) *Review of dredge fishing technologies and practice for application in New Zealand*. New Zealand Fisheries Assessment Report 2004/37, July 2004. Available at <u>www.fs.fish.gov.nz</u>.

¹¹ These restrictions are set by the Fisheries (Commercial Fishing) Regulations 2001; and Fisheries (Auckland and Kermadec Areas Commercial Fishing) Regulations 1986.

¹² Fisheries (Commercial Fishing) Regulations 2001, Reg 78.

¹³ Ibid.

¹⁴ Fisheries (Auckland and Kermadec Areas Commercial Fishing) Regulations 1986, Reg 22.

¹⁵ These restrictions are set by the Fisheries (Amateur Fishing) Regulations 2013. See Reg 28 (seasons), Reg 101 (minimum size), and Sch 1 (daily limits).

¹⁶ FNZ (2021), above n 1, at page 6.

¹⁷ FNZ (2021), above n 5, page 474 (SCA 1) and page 499 (SCA CS).

the last surveys were undertaken; and that the current biomass of core scallop beds is close to, or lower than, the lowest historic level.¹⁸

- 3.8. The information included in the Discussion Paper demonstrates that the biomass of commercially fished scallop beds has declined by more than 80% in the Coromandel fishery over the past 10 years,¹⁹ and by more than 70% in the Northland fishery over the past 14 years.²⁰ Steeper declines have been observed within certain areas. For example, the biomass of core scallop beds in the Hauraki Gulf declined from 1,005 tonnes in 2012 to 52 tonnes in 2021.²¹ The current biomass is therefore only 5% of the 2012 biomass. Long-term declines have been observed at all commercially targeted scallop beds except for Pakiri, which hosts a relatively low biomass of 7 tonnes. Similar declines have been observed across recreationally targeted scallop beds located in the Bay of Islands and the Hauraki Gulf.
- 3.9. The results of the latest stock assessment show the level of recruitment for both juvenile and pre-recruit scallops (scallops smaller than 89 to 99 mm depending on the fishery) is very low relative to historic levels at most of the core scallop beds in the northeastern fisheries.²²
- 3.10. These figures are alarming. They show that the northeastern scallop populations are on the verge of widespread and persistent collapse. Indeed, the latest stock assessments suggest some of the core commercially fished scallop beds in the Far North have already collapsed. For example, in Spirits Bay the biomass declined from 41 tonnes to 1 tonne between 2007 and 2021; and in Rangaunu Bay, the biomass declined from 122 tonnes to 28 tonnes over the same period. Recruitment is an indicator of the number of small scallops that will enter a fishery over the next few years. The historically low levels of recruitment observed suggest the capacity of the stocks to rebuild efficiently or to support fisheries in the future is seriously compromised.

Implications of widespread declines in scallop density and abundance

- 3.11. EDS is concerned at the wider implications of recorded declines in the abundance and density of scallops in northeastern Aotearoa New Zealand.
- 3.12. Scallops are identified as one of the key species comprising large dense shellfish beds in shallow coastal waters in Northland, the Hauraki Gulf and Coromandel.²³ A recent review by NIWA (2019) describes large shellfish beds as an important biogenic habitat which provide a wide range of ecosystem services.²⁴ Bivalves, including scallops and mussels, are suspension feeders, and perform an important role in maintaining water clarity by filtering suspended particulates from the water column. Studies have shown that bivalve beds support effective nutrient cycling, through sediment reworking, nutrient processing, and altering flow dynamics across the seabed. In addition, aggregations of large emergent bivalve species

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¹⁸ FNZ (2021), above n 1, page 10.

 ¹⁹ Representing a decline from 1,397 tonnes to 249 tonnes in biomass between 2012 and 2021. Refer FNZ (2021), above n 1, at page 10.
 ²⁰ Representing a decline from 237 tonnes to 64 tonnes in biomass between 2007 and 2021. Refer FNZ (2021), above n 1, at page 10.
 ²¹FNZ (2021), above n 1, page 10.

²² FNZ (2021), above n 1, page 11 (SCA 1) and page 12 (SCA CS).

²³ National Institute of Water & Atmospheric Research Ltd (NIWA) (2019) *Review of New Zealand's Key Biogenic Habitats: Prepared for the Ministry for the Environment*, page 125. Available at <u>www.environment.govt.nz</u>. Note the summary and references to "studies" in this paragraph of the submission is based on information contained in the NIWA review. Please see the review for the foundational research. ²⁴Ibid

(such as horse mussels and green-lipped mussels) create structurally complex benthic habitats, which provide a hard substrate for reef-forming and sponge garden species to colonise and support marine biodiversity. Studies have consistently shown that the diversity and abundance of benthic marine communities are significantly higher within bivalve beds.

- 3.13. In addition to the wider ecosystem benefits they provide, the aggregation of scallops into large shellfish beds is thought to increase their breeding success. Scallops are broadcast spawners and high densities of scallops are likely to be disproportionately more important for fertilisation success during spawning when eggs and sperm are shed into the water column.²⁵ After fertilisation, the eggs develop into free-swimming larvae before settling (as spat) onto benthic flora and fauna. Research by Bull (1976) showed that spat settlement mostly occurs on filamentous material (i.e., algal fuzz occurring on hard substrates) and rarely occurs on bare substrates of mud, sand or broken shell.²⁶
- 3.14. The loss of scallops from coastal areas in northeastern Aotearoa New Zealand is an indicator of wider declines in marine biodiversity and ecosystem functioning. EDS considers there is an urgent need to set strong protective measures to support the recovery of northeastern scallop populations, and to restore their functional role in coastal ecosystems.

Effects of scallop dredging on the marine environment

- 3.15. As previously described, dredge fishing methods are used for all commercial harvest of scallops, and some recreational harvest of scallops, in the northeastern fisheries.
- 3.16. The benthic impacts of bottom contact fishing methods, including those used for shellfish dredging, are one of the most significant threats to the marine environment in Aotearoa New Zealand.²⁷ A study by MacDiarmid et al. (2012) found dredging and trawling activities were the two highest-ranking direct threats to marine habitats in Aotearoa New Zealand.²⁸ Dredging for shellfish was assessed to affect forty different marine habitats, with the greatest impacts occurring on shelf mud, sand and gravel habitats and biogenic calcareous reefs.²⁹ Moderate impacts were assessed to occur on coastal mud, sand and reef habitats within the 30 m depth limit.³⁰ The study found dredging also adversely impacted on shellfish and seagrass habitats.³¹
- 3.17. The use of dredges to harvest shellfish generates a range of direct and indirect effects on the marine environment. Direct effects include inadvertently crushing shellfish and non-target organisms or removing them as bycatch.³² In addition, the persistent removal of large mature

31 Ibid.

²⁵ Wiliams, J.R., (2005) "Reproductive ecology of the scallop, Pecten novaezelandiae." Unpublished PhD thesis, University of Auckland, Auckland, New Zealand. 134 p. This research is cited in FNZ (2021), above n 5, at page 476.

²⁶ Bull, M F (1976) "Aspects of the biology of the New Zealand scallop, Pecten novaezelandiae Reeve 1853, in the Marlborough Sounds". PhD thesis, Victoria University of Wellington, Wellington, New Zealand. This research is cited in FNZ (2021), above n 5, at page 476. ²⁷MacDiarmid, A., McKenzie, A., Sturman, J., Beaumont, J., Mikaloff-Fletcher, S., and Dunne, J. (2012) "Assessment of anthropogenic threats to New Zealand marine habitats" New Zealand Aquatic Environment and Biodiversity Report No. 93. 255 p. At page 4. ²⁸ MacDiarmid et al., (2012), above n 27, page 58.

²⁹ Ibid.

³⁰ Ihid

³² These impacts are identified in Thrush, S., Hewitt, J., Cummings, V.J., Dayton, P.K. (1995) "The impact of habitat disturbance by scallop dredging on marine benthic communities: what can eb predicted from the results of experiments?" Marine Ecology Progress Reports. Vol. 429: 141-150.

species can result in benthic communities becoming dominated by juvenile species, with implications for the sustainability of shellfish populations.³³ Collectively, these impacts result in altered benthic community structure and reduced species diversity.³⁴

- 3.18. As dredging gear is dragged along the seabed, it destroys fragile marine habitats (e.g., sponge gardens) that create three-dimensional structural complexity in an otherwise relatively featureless environment.³⁵ The complex structure created by biogenic habitats provides important breeding and nursery areas for juvenile fish, refuge from predators, and substrate for settlement by shellfish larvae.³⁶ In addition, many biogenic habitats (e.g., macroalgal meadows and rhodolith beds) fulfil an important role in primary production and underpin the food web of soft-sediment ecosystems. Biogenic habitats support the juvenile life stages of many commercially fished species and are therefore of potential significance for fisheries management. There is considerable spatial overlap in the distribution of important biogenic habitat types including soft-sediment macroalgal meadows, sponge gardens, rhodolith beds, and bryozoan thickets and scallop beds in northeastern Aotearoa New Zealand,³⁷ which indicates that these habitats are particularly vulnerable to the benthic impacts of dredging.
- 3.19. Studies have shown that scallop dredging equipment has a "grader-like" impact on the micro-topography of the seafloor, by flattening natural mounds and infilling pits and depressions.³⁸ The residual tracks and flattened areas left by scallop dredge skids can persist for months.³⁹
- 3.20. The latest Aquatic Environment and Biodiversity Annual Review 2019-20 (**AEBAR**) includes a summary of the available literature on the benthic impacts of mobile bottom fishing methods.⁴⁰ Some of the key findings from studies of the impacts linked to scallop dredging in northeastern fisheries are reproduced below:⁴¹
 - (a) "Density of common macrofauna at both sites decreased as a result of dredging at two contrasting sites; some populations were still significantly different from reference plots after three months." (Mercury Islands scallop dredge impacts, reported by Thrush et al. 1995).
 - (b) "Decreases in the density of echinoderms, long lived taxa, epifauna, especially large species, the total number of species and individuals, and the Shannon-Weiner diversity index with increasing fishing pressure (including trawl and scallop dredge). Increases in the density of deposit feeders, small opportunists, and the ratio of small to large heart urchins." (Hauraki Gulf, bottom trawl and scallop dredge impacts, reported by Thrush et al. 1998).

³³ Ibid.

³⁴ Ibid.

³⁵ Ibid, at page 144.

³⁶ See review by NIWA (2019), above n 23.

³⁷ See review by NIWA (2019), above n 23.

³⁸ Currie, D.R. and Parry, G.D. (1996) *Effects of scallop dredging on a soft sediment community: a large-scale experimental study.* Marine Ecology Progress Series. Vol 134; 131-150.

³⁹ Currie and Parry (1996), above n 38.

⁴⁰ FNZ (2020). Aquatic Environment and Biodiversity Annual Review 2019–20. Compiled by the Fisheries Science Team, MPI, Wellington New Zealand. Chapter 11, from page 394.

⁴¹ FNZ (2020), above n 40, pages 418-419.

- (c) "Sponges seemed most affected by scallop dredging, and samples taken in an area once rich in sponges had few species in 1999. This area had probably been intensively dredged for scallops. Analysis of historical samples of scallop survey bycatch showed a marked decline in sponge species richness between 1996 and 1998." (Spirits Bay scallop dredge impacts, reported by Cryer et al. 2000; Tuck et al. 2010; and Tuck and Hewitt 2013).
- (d) "In 2010, analysis of both epifaunal and infaunal community data identified change since 2006, and significant depth, habitat, and fishing effects. The combined fishing effects accounted for 15–30% of the total variance (about half of the explained variance)." (As above).
- 3.21. The best available information shows that the use of indiscriminate dredge methods for the harvest of scallops and other shellfish species in northeastern Aotearoa New Zealand has already negatively impacted on marine biodiversity and ecosystem functioning.
- 3.22. Dredging also has indirect adverse effects on benthic flora and fauna, through the resuspension of fine sediments. The plume of sediment generated in the wake of dredge gear is of particular consequence for filter feeders, which source food directly from the water column. There is considerable uncertainty around how sediment suspension and resettlement may impact on the biological functions of scallops, though it is widely thought that resuspended sediment has an adverse impact on bivalve feeding processes, growth rates, and survivorship.⁴² In addition, the resettlement of sediment across the seafloor can reduce the area available for spat settlement by burying suitable substrate, which in turn reduces bivalve recruitment.
- 3.23. Studies indicate that the recovery of benthic marine species and habitat from dredging impacts can take several years, although recovery is influenced by a variety of factors including local environmental conditions and the significance of cumulative bottom contact fishing methods in an area.⁴³ A study by Lambert et al. (2014) estimated recovery from scallop dredging to take anywhere from less than one year to over ten years, depending on the species impacted, with faster recovery in areas flushed frequently by strong tidal currents.⁴⁴ Hard biogenic structures (e.g., reefs, bryozoan mounds) are predicted to recover most slowly, and some studies have shown that sensitive habitat is permanently degraded by bottom contact fishing methods.⁴⁵

Other pressures facing northeastern scallop stocks

3.24. Scallop populations in Aotearoa New Zealand are under increasing pressure from multiple stressors including: land-based activities; exotic marine species; disease; and changes in ocean temperature and chemistry.

⁴² See review by Office of the Prime Minister's Chief Science Advisor (PMCSA) (2021) The Future of Commercial Fishing in Aotearoa New Zealand, page 67.

⁴³ FNZ (2020), above n 40, pages 402 to 403.

⁴⁴ See FNZ (2020), above n 40, page 400.

⁴⁵ FNZ (2020), above n 40, page 400.

- 3.25. Land-based effects including sedimentation from land erosion and effluent associated with agricultural run-off and sewage discharges are a threat to shellfish populations in Aotearoa New Zealand.⁴⁶ A study by Sheffield et al. (1995) found sedimentation rates increased from 0.1 mm per year (pre-human rates) to 11 mm per year (after the 1880s) in the Whangamatā Estuary.⁴⁷ The significant increase was attributed to the clearance of the relatively steep surrounding catchment, and more recently, the development and felling of commercial forestry.⁴⁸ A study in the Mahurangi Harbour, north of Auckland, documented changes in the structure of benthic sediments with an increase in fine sediments through time, and associated decreases in the abundance and diversity of intertidal invertebrate populations.⁴⁹
- 3.26. Scallops, especially those located in sheltered harbours and bays, are sensitive to increasing sedimentation and can become smothered and starve due to reduced feeding efficiency. These sheltered environments are most commonly targeted by recreational fishers in northeastern fisheries and the cumulative pressures must be considered and addressed in decision-making. As previously outlined, changes in the distribution of sediment can also reduce the area available for scallop settlement, and consequentially reduce recruitment for scallop fisheries.
- 3.27. The introduction and subsequent expansion of non-indigenous marine species can also impact scallop populations, by intensifying competition for space and causing infection and disease. In 2015, the shellfish parasite Perkinsus Olseni was recorded in scallop beds around Great Barrier Island and the Mercury Islands.⁵⁰ Investigations were initiated following diver reports of deformed, watery and small scallops in these areas.⁵¹ The Ministry for Primary Industries (MPI) took samples of scallops and found inflammation and degeneration of the digestive tracts of some of the scallops tested.⁵² MPI observed that scallops were unable to feed properly.⁵³ Although there is uncertainty as to the precise role of the parasite in the observed decline in scallop health, it is widely accepted that disease reduces the capacity of scallops to deal with other pressures in the marine environment, and limits their capacity to recover from them.
- 3.28. Ocean warming and acidification are anticipated to increase stress on shellfish species,⁵⁴ although there is a limited understanding of how these processes will disrupt scallop populations. Oceans will continue to become more acidic as they absorb carbon dioxide, and reversing this profound change will take tens of thousands of years.⁵⁵ EDS considers it is therefore essential that the pressures we can directly control, such as fishing, are carefully managed to ensure the sustainability of scallop populations.

52 MPI (2015), above n 50. 53 Ihid

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⁴⁶ See MacDiarmid et al. (2012), above n 27; and NIWA (2019), above n 23.

⁴⁷ Sheffield, A.T., Healy, T.R., McGlone, M.S. (1995) "Infilling rates of a Steepland Catchment Estuary, Whangamata, New Zealand" Journal of Coastal Research. 11(4) pages 1294 to 1306.

⁴⁸ Ibid.

⁴⁹ Cummings, V., Nicholls, P., Thrush, S. (2003) Mahurangi Estuary ecological monitoring programme – report on data collected from July 1994 to January 2003. Prepared for ARC. NIWA Project: ARC03207.

⁵⁰ MPI (2015) Media release: a combination of many causes for deformed scallops. Available at: <u>www.mpi.govt.nz</u>.

⁵¹ NZ Herald (2015) "Scallop fisheries monitored after parasite threat" Available at: www.nzherald.co.nz.

⁵⁴ Ministry for the Environment & Stats NZ (2019). New Zealand's Environmental Reporting Series: Our marine environment 2019, pages 47 to 53. Available from www.mfe.govt.nz and www.stats.govt.nz. 55 Ibid.

4. Legislative context

4.1. This submission includes consideration of the proposals in the broader context described, and in the context of current legislative requirements under the Fisheries Act 1996 (the Act). In exercising powers to set or vary sustainability measures under s 11 of the Act, the Minister is required to take several matters into account, and to comply with specific statutory directives.

Purpose of the Act

4.2. The Minister's powers must be exercised in a manner that is consistent with achieving the purpose of the Act. In accordance with s 8 of the Act, the purpose is to "provide for the utilisation of fisheries resources while ensuring sustainability".⁵⁶ The terms "utilisation" and "ensuring sustainability" are defined by s 8(2) of the Act, and are reproduced below:

ensuring sustainability means -

- (a) maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations; and
- (b) avoiding, remedying, or mitigating any adverse effects of fishing on the aquatic environment.

utilisation means conserving, using, enhancing, and developing fisheries resources to enable people to provide for their social, economic, and cultural well-being.

- 4.3. The interpretation of the purpose of the Act is informed by the statutory definitions included in s 2 of the Act.
- 4.4. The word "effect" is defined broadly to include any direct or indirect effect of fishing; any temporary or permanent effect; any past, present or future effect; and any cumulative effect which arises over time or in combination with other effects. The definition of "effect" also includes a potential effect, if it is considered to have a high probability of occurrence or where it will have a high potential impact.
- 4.5. The term "aquatic environment" is also defined broadly as "the natural and biological resources comprising any aquatic ecosystem" and to include "all aquatic life" and "places where aquatic life exists". The definition of "aquatic life" captures "any species of plant or animal life that, at any stage of its life history, must inhabit water, whether living or dead", while the term "aquatic ecosystem" is defined as "any system of interacting aquatic life within its natural and physical environment".
- 4.6. In New Zealand Recreational Fishing Council Inc v Sanford Ltd⁵⁷ the Supreme Court was required to consider how the competing policies of utilisation and sustainability should be accommodated in decision-making under the Act. The majority of the Supreme Court held that the weight given to the utilisation of a fisheries resource must not jeopardise

⁵⁶ Fisheries Act 1996, s 8(1).

⁵⁷ New Zealand Recreational Fishing Council Inc v Sanford Ltd [2009] NZSC 54, [2009] 3 NZLR 438.

sustainability, which was to be ensured.⁵⁸ EDS considers this decision emphasises the environmental bottom line that is established by s 8 in regard to ensuring sustainability of fisheries resources, all other marine species, and the wider marine environment.

4.7. To achieve consistency with the purpose of the Act, EDS considers the Minister's decision to set or vary sustainability measures for the northeastern scallop stocks must respect the environmental bottom line established by s 8(2)(b) which means avoiding, remedying or mitigating any adverse effects of fishing on all marine species and the marine ecosystems they comprise.

Environmental principles

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

Information principles

- 4.9. When making a decision on sustainability measures, the Minister must take account of the following principles in s 10 of the Act:
 - (a) decisions should be based on the best available information:
 - (b) decision makers should consider any uncertainty in the information available in any case:
 - (c) decision makers should be cautious when information is uncertain, unreliable, or inadequate:
 - (d) the absence of, or any uncertainty in, any information should not be used as a reason for postponing or failing to take any measure to achieve the purpose of this Act.
- 4.10. The interpretation of the environmental and information principles listed under ss 9 and 10 of the Act is assisted by reference to the statutory definitions included in s 2 of the Act. The principles are discussed in greater detail below where applicable to submission points on the specific proposals.

Hauraki Gulf Marine Park Act

4.11. Before setting or varying any sustainability measure under s 11 in respect of stocks located within the Hauraki Gulf, the Minister must have regard to ss 7 and 8 of the Hauraki Gulf

^{s8} New Zealand Recreational Fishing Council Inc v Sanford Ltd [2009] NZSC 54, [2009] 3 NZLR 438 at [39].

Marine Park Act 2000 (**HGMPA**). Section 7 requires recognition of the national significance of the Hauraki Gulf, and the ability of the interrelationship between the Hauraki Gulf, its islands and catchments, to sustain the life-supporting capacity of the environment. Section 8 requires that a range of management objectives are taken into account. The objectives seek to protect and, where appropriate, enhance the life-supporting capacity of the environment and natural resources of the Hauraki Gulf.

5. General comments on proposed sustainability measures

5.1. The Discussion Paper includes three options for ministerial consideration. The options share the general aim of rebuilding the northeastern scallop stocks by significantly reducing current catch limits and allowances. Option 1 proposes a full closure to the commercial and recreational harvest of scallops, while Options 2 and 3 propose different combinations of catch reductions, spatial restrictions and / or gear restrictions. This section of the submission includes general comments on the proposed options, and more specific comments on each option are included in section 6, below.

Scientific uncertainty

- 5.2. EDS emphasises that there is considerable scientific uncertainty and substantive gaps in the best available information on the northeastern scallop fisheries. Based on a review of the latest Plenary Report, the following constraints were identified:
 - (a) there is no available estimate of unfished biomass for either of the northeastern scallop populations (a reference point that is typically used to evaluate the status of a stock relative to an estimate of average biomass in the absence of fishing);
 - (b) there is no available estimate of a biomass level for either of the northeastern scallop populations that will support MSY;
 - (c) there are significant information gaps due to extended periods where no independent stock assessments were undertaken (the Northland stock was not surveyed in 1999, 2000, 2004, or between 2008 and 2020; and the Coromandel stock was not surveyed between 2013 and 2020);
 - (d) differences in the sampling methods used for stock assessments, and the spatial coverage of surveys, makes it difficult to reliably compare the results of biomass estimates to understand how the stock has changed through time;
 - (e) there is scientific uncertainty stemming from assumptions about dredge efficiency during stock surveys, which has previously resulted in overestimates of stock biomass; and
 - (f) there is scientific uncertainty due to the highly variable nature of scallop recruitment dynamics and spatial variability in the density, growth rates and natural mortality rates of scallops, which makes it challenging (and potentially inappropriate) to set traditional stock target and limit reference points.

- 5.3. It appears that uncertainty and gaps in available information have constrained the effectiveness of past management approaches. This in turn has been driven by a gross lack of investment in surveys or scientific research on the scallop populations. To date, no management targets or stock reference limits have been set for the northeastern scallop stocks. EDS emphasises that this outcome is not consistent with the policy guidance in the Harvest Strategy Standard (HSS), which represents best practice for managing fisheries in Aotearoa New Zealand.⁵⁹ The HSS consists of three core elements:⁶⁰
 - (a) A specified target about which a fishery or stock should fluctuate;
 - (b) A soft limit that triggers a requirement for a formal, time-constrained rebuilding plan; and
 - (c) A hard limit below which fisheries should be considered for closure.
- 5.4. EDS considers there is an urgent need to direct resources toward efforts to reduce uncertainty relating to the biological characteristics of the stock; to establish consistent stock monitoring protocols to enable stock biomass estimates to be tracked reliably through time; and to establish regular (at least annual) stock assessments. The best available information demonstrates that scallop stocks are highly variable through time and space, and it is essential that regular monitoring be undertaken to ensure adaptive management approaches can be implemented. In addition, EDS considers it important that adaptive management targets and limits be set for northeastern stocks in accordance with the guidance of the HSS. Specific targets will provide greater certainty to stakeholders around when strong management action (including full closures) may be required in the future. It will also provide for greater transparency in future decision-making. None of the proposed options specify a timeframe for rebuilding the depleted northeastern scallop stocks, and EDS considers this level of generality does not support effective or sustainable management of the stocks in the long-term.
- 5.5. Due to the considerable scientific uncertainty associated with current and historic estimates of scallop biomass in the northeastern fisheries, EDS considers a cautious approach to the setting of sustainability measures is justified in accordance with s 10(c) of the Act.

Best available information

5.6. The Discussion Paper does not include any information on the potential or actual adverse effects associated with the use of dredge fishing methods despite there being a considerable body of science on the matter as summarised above. The Discussion Paper includes a brief paragraph acknowledging there is "widespread concern around the impacts of dredging on the seabed and the wider marine environment".⁶¹ It also recognises that the removal of scallop dredging was a feature of the Sea Change – Tai Timu Tai Pari Hauraki Gulf Marine Spatial Plan (**the Sea Change Plan**) and the Government response to the Sea Change Plan. These general references acknowledge there are concerns about dredging, but the Discussion

⁵⁹ MPI (2008) Harvest Strategy Standard for New Zealand Fisheries available at <u>www.mpi.govt.nz</u>.

⁶⁰ MPI (2008), above n 59, page 7.

⁶¹ FNZ (2021), above n 1, page 28.

Paper does not include information on the adverse effects of dredging to enable the Minister to consider the implications of the proposals (some of which provide for dredging of scallop beds in certain areas).

5.7. In addition, the Discussion Paper does not include any information to enable an evaluation of other environmental or anthropogenic pressures facing the northeastern scallop stocks. In regard to environmental impacts, it states:⁶²

"FNZ notes that while environmental factors, such as sedimentation and water quality, may also affect scallop growth and mortality rates, it does not have a direct role in managing such environmental impacts".

- 5.8. As previously described, there is considerable scientific information available on these matters. An understanding of the cumulative pressures facing scallop stocks is important for evaluating the implications of fishing pressure on scallop stocks, scallop beds, and the wider marine environment.
- 5.9. In setting sustainability measures under s 11 of the Act, the Minister is required to consider the importance of making decisions based on the best available information.⁶³ The term "best available information" is defined in s 2 of the Act, as "the best information that, in the particular circumstances, is available without unreasonable cost, effort or time".⁶⁴ In addition, the Minister is required to consider the environmental principles that marine biodiversity should be maintained; and that habitat of particular significance for fisheries management should be protected.⁶⁵
- 5.10. EDS considers the Discussion Paper does not represent the best available information on the adverse effects of dredge fishing methods on scallop populations; the functional capacity of shellfish beds; and benthic species and habitat in general. EDS considers the omission of relevant information on these matters means any decision by the Minister to set or vary sustainability measures for the northeastern scallop stocks will not be based on the best available information and is not consistent with the information principles listed under s 10 of the Act. In addition, any decision by the Minister to set or vary the TAC for either stock (as proposed by Option 2 and Option 3) must comply with the requirements of s 13(2A) of the Act, which include a requirement to set a TAC "using the best available information".
- 5.11. EDS requests that additional information be included in the Discussion Paper on these matters to enable the Minister to make an informed decision in accordance with the requirements of the Act. Otherwise, the decision will not meet the legal requirements under the Act.

⁶² FNZ (2021), above n 1, page 28, at [164].

⁶³ Fisheries Act 1996, s 10(a).

⁶⁴ Fisheries Act 1996, s 2.

⁶⁵ Fisheries Act 1996, s.9.

6. Specific comments on proposed sustainability measures

Option 1: full closure of northeastern scallop fisheries

- 6.1. Option 1 proposes a full closure to the commercial and recreational harvest of scallops in the northeastern fisheries for an indefinite period.⁶⁶ The Discussion Paper advises that FNZ will seek new information on the abundance and biomass of northeastern scallops within three years (i.e., by 2025). At that time, if new information suggests the stocks have recovered, FNZ will review whether the closure is still required. The Discussion Paper states that a long-term management approach will be developed during the initial closure period to ensure any reopening of the fishery can occur while ensuring sustainability of the stocks.
- 6.2. The closure of northeastern scallop fisheries is proposed to be implemented as an area-based measure under s 11 of the Act. Consequently, no changes are proposed to be made to the current TAC, TACC or other allowances. A closure under s 11 does not apply to authorised customary fisheries, which would be able to continue.

Analysis of proposal

- 6.3. EDS supports Option 1 as a minimum requirement for the management of the northeastern scallop fisheries.
- 6.4. EDS considers the evidence of widespread declines in scallop densities and abundance, and the collapse of several important scallop beds, demonstrates there is an urgent need to close the northeastern scallop fisheries in order to support their potential recovery.
- 6.5. EDS has some concerns about the generality of the proposal. As previously outlined, EDS considers there is a pressing need to establish an evidence-based adaptive management target and associated limits for the stock in accordance with the guidance set out in the HSS. Management reference limits are necessary for identifying when the stocks have adequately rebuilt to levels that can support sustainable fisheries. It also provides for the determination of suitable timeframes for rebuilding the stocks. Option 1 does not specify any timeframe for rebuilding the stocks, and it is not clear what factors will be considered in determining any future reopening of the fisheries. The Discussion Paper advises that a review will be undertaken by 2025, and a decision will be made based on the latest stock assessments.
- 6.6. EDS considers a more cautious approach is required due to the considerable uncertainty associated with estimates of scallop biomass and determining the status of the stocks. EDS requests that Option 1 is amended to propose a full closure of the northeastern scallop fisheries until:
 - (a) management targets and limits have been set for the stocks based on the best available scientific information; and

⁶⁶ FNZ (2021), above n 1, pages 22-23.

- (b) surveys demonstrate that the biomass of each stock has recovered to a level that can support sustainable fisheries and ecosystem functioning (in accordance with the defined management reference levels).
- 6.7. In the absence of clear management reference limits or an explicit rebuilding timeframe, EDS considers there is a risk that pressure from stakeholders could result in the fishery re-opening before it is sustainable to do so.
- 6.8. In the interim, EDS considers Option 1 should include additional measures to reduce the TAC, TACC and other catch allowances to zero until a suitable long-term management target and reference limits are implemented.
- 6.9. EDS is concerned at the potential continuation of dredge harvest methods in the future under Option 1. As previously described, the use of dredge fishing methods to harvest shellfish has widespread and persistent impacts on benthic habitat, marine biodiversity, and ecosystem functioning. The best available information indicates that successful scallop breeding and recruitment relies on dense aggregations of scallops in large bedforms. To maintain genetic diversity and support ecosystem resilience, it is essential that connectivity between shellfish beds is maintained and enhanced. The literature also indicates that benthic habitat can take several years (or longer) to recover from the impacts of mobile bottom contact fishing methods.
- 6.10. EDS requests that Option 1 be amended to include an indefinite prohibition on the use of commercial and recreational dredge methods to harvest shellfish in the northeastern fisheries. EDS considers the use of dredge methods is not consistent with the environmental principles in s 9 of the Act, which the Minister is required to take into account when making decisions on sustainability measures. In particular, EDS considers the use of dredge methods to harvest scallops is not consistent with the principles that marine biodiversity should be maintained and that habitat of particular significance for fisheries management should be protected. EDS considers the purpose of the Act can be better achieved by regulating an indefinite ban on the use of dredge methods to harvest shellfish in the northeastern fisheries. EDS considers leaving the potential for future dredge fisheries open is not sufficiently cautious for ensuring sustainability in accordance with the principles and the purpose of the Act.
- 6.11. Due to cumulative pressures in the marine environment, a full closure of the northeastern scallop fisheries may not be sufficient to ensure the recovery of scallop stocks. For example, a prohibition on scallop harvesting in the Marlborough Sounds fishery was implemented in 2016, but no recovery was observed after four years. The Discussion Paper recognises the potential for active restoration to play a role in scallop recovery. However, it defers to the proposed habitat restoration guidance set out in the Sea Change Plan. EDS emphasises that this guidance will only apply to the Hauraki Gulf, and the northeastern fisheries expands across a much larger area. EDS does not consider the potential for active restoration approaches is compatible with the use of dredge equipment to harvest shellfish. In general, EDS supports the consideration of evidence-based restoration efforts, in conjunction with

stronger gear restrictions. EDS requests that additional consideration be given to active restoration approaches, and included in advice to the Minister.

- 6.12. To support the long-term sustainability of northeastern scallops in the context of increasing pressures and future environmental change, EDS submits that consideration should be given to the permanent protection of important scallop beds in Northland and Coromandel. For example, the Discussion Paper identifies core recreational scallop beds within the Bay of Islands, Whangārei, Kawau and Mercury Islands; and core commercial scallop beds in the Far North, Pakiri, Bream Bay, around Great Barrier Island and in the Bay of Plenty. EDS considers permanent spatial restrictions on the harvest of scallops should be implemented under s 11 of the Act. Permanent protection is consistent with the principles of the Act and will better achieve the purpose of the Act.
- 6.13. The additional measures suggested will better achieve consistency with ss 7 and 8 of the HGMPA, by recognising the national significance of the Hauraki Gulf, and by taking action to restore (and thereby protect) the life-supporting capacity of the waters, shellfish, and ecosystems of the Hauraki Gulf.

Option 2: partial closure of northeastern scallop fisheries and reduced catch limits

6.14. Option 2 proposes to reduce the TAC, TACC and other fishing allowances for northeastern scallop stocks; and to implement spatial restrictions on the harvest of scallops from large areas within both fisheries. The spatial restrictions are proposed to apply for an indefinite period, with further information sought within three years.

<u>Analysis of proposal</u>

6.15. To avoid repetition, comments on the suite of measures proposed under Option 2 are included in Table 1 below.

ciple, EDS supports this proposal subject to the rs outlined in regard to Option 1. Thes not support this proposal because: is not sufficiently cautious to support the covery of scallop populations; ere is not sufficient scientific evidence to pport the view that harvesting in these areas is stainable; cal tangata whenua have expressed concern at is proposal on the basis that it is unsustainable; d S considers remaining scallop beds should be ly protected until the northern stock has covered.

Table 1. EDS's comments on the suite of proposed measures included under Option 2.

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A prohibition on the use of recreational dredging methods to harvest scallops. A reduction in the TAC from 30 tonnes to 9.5 tonnes, reflecting reductions in the allowances for recreational catch and other sources of mortality, and the setting of a "zero limit" for the TACC.	EDS supports this proposal and requests an indefinite prohibition on the use of all dredging methods for the commercial and recreational harvest of scallops. In principle, EDS supports a reduction in the current catch limits and allowances, but considers there is not sufficient scientific evidence to support any scallop harvesting until the stock rebuilds. EDS supports the inclusion of catch reductions in conjunction with stronger spatial restrictions and a full closure of the stock until it has rebuilt to a sustainable level.
Coromandel scallop fishery (SCA CS)	
A closure to the commercial and recreational harvest of scallops in all areas except for Little Barrier and the Colville Channel (in these areas commercial and recreational dredging methods will be permitted subject to catch reductions).	 EDS does not support this proposal because: (a) it is not sufficiently cautious to support the recovery of scallop populations; (b) there is not sufficient scientific evidence to support the view that harvesting in these areas is sustainable; (c) EDS considers remaining scallop beds should be fully protected until the stock has recovered; and (d) EDS considers the use of dredge fishing methods is not consistent with the principles and purpose of the Act (refer comments on Option 1); (e) EDS considers there is an urgent need to prohibit the use of dredge fishing methods to ensure sustainability of the stocks and marine environment.
	EDS emphasises that a daily bag limit of 20 scallops applies to recreational fishers in this area. The risk of widespread and persistent adverse impacts on benthic structure and habitat is particularly unreasonable in this context.
A reduction in the TAC from 81 tonnes to 19 tonnes, reflecting reductions in the allowances for all catch types.	In principle, EDS supports a reduction in the current catch limits and allowances, but considers there is not sufficient scientific evidence to support any scallop harvesting until the stock rebuilds.

Option 3:

6.16. Option 3 proposes to reduce the TAC by setting a baseline TACC of zero for northeastern scallop stocks (i.e., restricting commercial fishing in the absence of information to support an in-season adjustment to the TACC); and to prohibit the use of dredge fishing methods for the recreational harvest of scallops. No spatial restrictions are proposed.

Analysis of proposal

6.17. To avoid repetition, comments on the suite of measures proposed under Option 3 are included in Table 2 below.

Table 2. EDS's comments on the suite of proposed measures included under Option 3.

Proposed measure Northland scallop fishery (SCA 1)	EDS comments
A prohibition on the use of recreational	In principle, EDS supports this proposal but considers
dredging methods to harvest scallops.	it does not go far enough to ensure sustainability of
	scallop stocks or the marine environment. As
	previously outlined, EDS requests an indefinite
	prohibition on the use of all dredging methods for the
	commercial and recreational harvest of scallops.
No change is proposed to the allowances	EDS does not support this proposal, and considers a
for recreational and customary fishing.	full closure is required to support the recovery of
	scallop stocks.
A reduction in the TAC from 30 tonnes to	In principle, EDS supports the setting of a baseline
16 tonnes, reflecting reductions in the	TACC of zero. However, EDS does not consider there
allowances for fishing mortality and the	is sufficient evidence to support the continuation of
setting of a "zero-limit" TACC.	harvest activities while scallop biomass is at a historic
	low point. EDS considers a reduction in the catch
	limits do not go far enough and requests that a full
	closure is immediately implemented and maintained
	until the stocks have recovered.
Coromandel scallop fishery (SCA CS)	
A prohibition on the use of recreational	As above.
dredging methods to harvest scallops.	
A reduction in the TAC from 81 tonnes to	In principle, EDS supports the setting of a baseline
14 tonnes, reflecting reductions in harvest	TACC of zero. However, EDS does not consider there
allowances, and the setting of a "zero-	is sufficient evidence to support the continuation of
limit" TACC.	harvest activities while scallop biomass is at a historic
	low point. EDS considers a reduction in the catch
	limits do not go far enough and requests that a full
	closure is immediately implemented and maintained
	until the stocks have recovered.

Summary of comments on Options 2 and 3

6.18. In summary, EDS considers there is not sufficient evidence to support the continuation of recreational or commercial harvest activities in SCA 1 or SCA CS. For the reasons previously outlined, EDS considers there is a need for a full closure of both fisheries until the stocks have recovered to sustainable levels. Based on the information contained in the latest Plenary Report, the sites that are proposed to remain open to some harvest activity host relatively low scallop biomass. EDS considers there is a need to protect these scallop beds to reduce the risk of further declines in scallop biomass and to support the potential for recovery. In principle, EDS supports proposals to reduce current catch limits and allowances, but considers these do not go far enough, on their own, to safeguard the stocks from collapse.

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