From:	Our Seas Our Future Info
To:	FMSubmissions
Cc:	info@osof.org
Subject:	Fisheries Sustainability Review 2019
Date:	Friday, 26 July 2019 4:51:46 PM
Attachments:	Fisheries Sustainability Review 2019 - OSOF FInal.docx.pdf

Kia ora

Please find attached the OSOF submission on the Sustainability Review 2019.

Regards,
[redacted]
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Ministry for Primary Industries
PO Box 2526
WELLINGTON 6140
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Date: July 26 2019

OUR SEAS OUR FUTURE
www.osof.org

Submission: Review of Sustainability Measures

General Introduction

1. Our Seas our Future ("OSOF") is a not-for-profit- organisation that aims to protect New Zealand's coastal and marine ecosystems through advocacy, education, and environmental stewardship, ensuring that they are managed sustainably and protected for future generations.
2. OSOF welcomes the opportunity to comment on the Ministry for Primary Industries **Review of Sustainability Measures** for Gemfish SKI 3/7, Elephant fish ELE 7, Gurnard GUR 7, John Dory JDO 7, Rig SPO 7, Hake HAK 7, Hoki (entire NZ coast), Kina SUR 1A/1B , Ling Lin 7, Orange Roughy ORH3B, Orange Roughy 7A, Paua PAU 4, Red Snapper RS ½.

Gemfish SKI 1 and 2 (entire south island and lower west coast north island)

Question 1: Do you support the proposed TAC and TACC adjustment? Why?

1. **No** – OSOF does not support the proposed TAC and TACC adjustments for SKI 1 and 2

Question 2: If you do not support the proposed option, what alternative(s) should be considered? Why?

2. Before MPI can justify a significant increase in fishing, MPI needs to provide further information about the projected biomass in respect of all of the options. MPI also needs to provide information about the spawning age of the gemfish.
3. The available information is not sufficiently reliable upon which to base a significant increase in fishing. The MPI document states that "BUT the working group considered that the stock assessment model was not sufficiently reliable to provide estimates of current biomass and/or stock status."
4. Figure 3 shows relative gemfish biomass estimates from inshore and deepwater West coast South Island trawl surveys between 2012 and 2018 (four surveys). However, the biomass figures are not discussed in the text of the document, so the biomass levels relative to the management target of 40% B_0 are not discussed. In figure 3 the biomass is recorded in tonnes and not as a percentage of the unfished biomass B_0.

5. Then submitters will be able to put MPI's comment of "Because of the short life span of this species, utilisation of these strong year classes will be lost to natural mortality if not taken over the next few years" into context.

Question 3: Can you provide any relevant information to inform the provision of allowances for the customary and recreational take of gemfish in SKI 3 and SKI 7?

6. Customary and recreational allowances are currently set low due to the depth and distance offshore in which gemfish are caught.

Hake HAK 7 (west coast south island).

Question 4: Which option for varying TAC and TACC do you support and why?

7. **Option 3.** Reducing the TAC by 3,664 tonnes, from 5,064 to 1,400 tonnes.
8. How reliable are the recruitment assumptions? There is no reliable evidence which accurately describes the likely type of recruitment to the fishery over the next few years. It is not known whether the recruitment will be average, below average or somewhere in between. In this case, it is best to be conservative and go with the below average recruitment assumption option which is Option 3. This ought to be the case even though fisheries NZ proposes to reduce the hoki western stock catch by a relatively small amount of between 13% - 20%, in respect of which hake are bycatch. The recruitment assumptions are very important in light of the estimated stock status currently being at the very low figure of 17% B_0 in the context of the management target being 40% B_0.

Hoki HOK 1 (entire New Zealand coast)

Question 5. Which option do you support for revising the TAC, TACC and allowances? Why?

9. Neither option.

Question 6. If you do not support either of the options listed, what alternative should be considered? Why?

10. **A better option would be one which reduces the TACC by 30%**
11. This would improve the five year projections for the stock to being above the current projections of either an increase from 56% B0 to 62% B0 (combined model) or from 29% B0 to 35% B0 (western stock focused model). This is in light of the management target range for the stock being 30 – 50% B_0.
12. An option which reduces the TACC by 30% would also decrease the risk posed to seabirds by hoki fishing. For example the 2019 seabird risk assessment estimates that hoki fishing poses a risk for three species, including the Southern Buller's albatross in respect of which hoki fishing contributes 31% of risk.

Ling LIN 7 (west coast south island and Cook Strait)

Question 7: Which option(s) do you support for revising the TAC, TACC and allowances? Why?

13. **0% increase**
14. There is no justification for an increase in allowance if populations are stable at current allowances. The information that suggests the Ling population to be increasing is insufficient.
15. The **review** claims the proposed TAC/TACC increase is not expected to adversely affect the populations of marine mammal species or seabirds given the low capture rates of these animals in LIN 7. However, the statement "zero seabirds observed caught" is due to observer coverage being low. This needs to be re-evaluated to ensure sustainability.
16. The majority of the fishing effort is likely to occur in the same areas that are already fished, therefore the trawl footprint is unlikely to increase significantly.

Question 8: If you do not support any of the options listed, what alternative should be considered? Why?

17. N/A

Orange Roughy ORH 3B (East Coast South Island)

Question 9**:** Do you support the proposed option? Why or why not?

18. **No -** OSOF does not support the proposed TAC and TACC adjustments for ORH 3B.
19. It is too soon to further increase the catch limit for the East and South Chatham Rise sub-stock (ESCR) of ORH 3B in the 2nd year of the 3 year management plan.
20. The proposed increases in the ORH 3B TAC as a whole and the ESCR sub-stock catch limit are relatively large (11% and 17% respectively). The current estimated biomass for ESCR of 33% B_0 is close to 30% (the bottom end of the target range). It would be better to wait until the current biomass reaches at least 40% B_0 given that the management target is 30-50% B_0.
21. Figures 4-7 in the **review** fails to show an increase in projected biomass. the 95% confidence intervals for the means of years (2018- 2023) overlap, which means there is no statistically significant differences between the means (at the 0.05 level of significance).
22. Acoustic surveys and stock assessments are completed every 4-years, but there is no mention as to where this falls among the 3-year management plan. These surveys could provide important information in determining stock biomass and need to be incorporated into ORH 3B management.

23. the **review** states that the "proposed increase in TAC/TACC is large enough to have a significant impact on the orange roughy stock should the biomass estimates be too optimistic," and they are too optimistic.

Question 10: Are the allowances for customary fishing appropriate? Do customary fishers have information on likely catch for the next fishing year given the TAC may be increased again in 2020/21?

24. Maintaining a customary allowance of 5 tonnes is unlikely to have a detrimental impact on ORH 3B, and the iwi of the South Island and the Chatham islands have" supported or not opposed" the three-year management strategy.

Orange Roughy ORH 7A (West coast South Island)

Question 11: Which option do you support for revising the TACs, TACCs and allowances? Why?

25. **Option 1.** Maintains the TAC at 1,680 tonnes and the TACC at 1,600 tonnes.
26. Retaining the TAC and the TACC at their current settings is projected to maintain the stock above the midpoint of the management target range of 30 – 50% B_0 for the next 8 years, estimating the stock will be at 43% B_0 in 2027. This would result in an annual average yield over the next 8 years of 1600 tonnes per year.
27. ORH 7A is being fished below or at the lower end of the management target range and has been since 2014/15.
28. The orange roughy start spawning between 32 – 41 years of age. It is important to give the fish time to reach spawning age which will improve the status of the stock, rather than fishing too intensely so that they do not reach spawning age.

Question 12**:** If you do not support any of the options listed, what alternative should be considered? Why?

29. N/A

ELE 7 (All top of South Island)

Question 13**:** Which option(s) do you support for revising the TACs, TACCs and allowances? Why?

30. **None** - OSOF does not support the TAC which is proposed to be set for elephant fish.
31. The biomass data for elephant fish is not sufficiently certain for a TAC to be set. Fisheries NZ considers ELE 7 is about as likely as not (40 – 60% probability) to be at or above B_{MSY}. Trawl survey data for this stock are less reliable. The other survey method employed was catch per unit effort (CPUE) from commercial fishery.

32. Although the recent standardised CPU analysis by Starr & Kendrick (2019) is extensive but isn't enough to increase a TAC. Multiple peer reviewed studies need to be incorporated into a TAC, not just one.
33. The **review** states that ELE 7 is a "relatively low knowledge stock" and more science is needed to determine their biomass.
34. There is no historic data on ELE 7 CPUE and Figure 7 in the **review** only shows 2008-2018, which is insufficient given the long life span of elephant fish and might not demonstrate accurate biomass trends.
35. The review states that when setting a TAC customary, recreational, and other sources of mortality allowances are required to be set and there isn't accurate data on these factors. When the QMS was established MPI set a customary catch at 5 tonnes and there is no knowledge of if this is an accurate representation.
36. Customary catches need to be recorded so estimates can be included in fisheries modelling. Tangata whenua operating under regulation 50 of the Fisheries (Amateur Fishing) Regulations 2013 is insufficient as they are not required to document their catch. Without accurate customary inputs the model used to produce the TAC might be overestimating or underestimating allowances and could result in ELE 7 being overfished.
37. There is no new information to support changing customary allowances for elephant fish during this **review**.
38. A 10 tonne recreational harvest for ELE 7 is estimated from the National Panel Survey of Marine Recreational Fishers which might be under-estimating their catch which results in an over-estimated recreational allowance.

Question 14. If you do not support any of the options listed, what alternatives should be considered? Why?

39. N/A

Gurnad GUR7 (All top of South Island)

Question 15. Which option(s) do you support for revising the TACs, TACCs and allowances? Why?

40. **No - Keep current TAC/TACC.**
41. GUR 7 appears to be experiencing a recruitment pulse, and patterns are supported by (figure 2/figure 3) in the **review**, especially considering there life history characteristics (fast growth rate and short life span). GUR 7 is estimated to be at 90% probability to be at or above target levels.
42. A 10% increase is more appropriate considering an increase in TACC for gurnard may result in an increase bycatch of john dory and rig.
43. These stocks are monitored regularly and an increase will be re-evaluated during stage 2 of this **review**.
44. There is currently a customary allowance for GUR 7 at 15 tonnes which is accounted for in stock assessments, but there is a high degree of error in these assessments.

45. Customary catches need to be accurately recorded so estimates can be included in fisheries modelling. Tangata whenua operating under regulation 50 of the Fisheries (Amateur Fishing) Regulations 2013 is insufficient as they are not required to document GUR 7 catch. Without customary inputs the model might be overestimating or underestimating TAC allowances and can result in overfishing.
46. there is no new information and/or recommendations to support changing customary allowances for GUR 7 during this **review**, therefore an increase is unjustified.
47. Recreational fishing 'estimated harvest' in the National Panel Survey of Marine Recreational Fishers might be underestimating the recreational fishing pressure. Additional measures in documenting recreational catch need to be determined.
48. Basing recreational catch allowances from results of the 2017/2018 National Panel Survey of Marine Recreational Fishers is problematic, as this is a voluntary survey and may not represent the exact catch rates for GUR 7.

Question 16. If you do not support any of the options listed, what alternatives should be considered? Why?

49. N/A

John Dory JDO 7 (All top of South Island)

Question 17. Which option(s) do you support for revising the TACs, TACCs and allowances? Why?

50. **None** -There is no statistical justification behind increasing the TAC. The 2019 WCSI trawl survey indicate decline in relative biomass, which the **review** States "is not statistically different from the last survey year 2017" (this can be seen by error bars in figure 6 not overlapping for the years 2017/2019).
51. The **review** states itself that because the confidence intervals are "large, crossing well over the target line, the scientific basis for an increase in utilisation is weaker

Question 18. If you do not support any of the options listed, what alternatives should be considered? Why?

52. Remaining at current TAC of 226 tonnes.
53. Customary catches need to be recorded so estimates can be included in fisheries modelling. Tangata whenua operating under regulation 50 of the Fisheries (Amateur Fishing) Regulations 2013 is insufficient as they are not required to document their JDO 7

catch. Without customary inputs the model might be overestimating or underestimating TAC allowances.

54. there is no new information and/or recommendations to support changing customary allowances for JDO 7 during this **review**, therefore an increase is unjustified.
55. Recreational fishing 'estimated harvest' in the National Panel Survey of Marine Recreational Fishers might be underestimating the recreational fishing pressure.

Rig SPO 7 (All top of South Island)

Question 19: Which option(s) do you support for revising the TACs, TACCs and allowances? Why?

56. None - it is important to note that the preliminary estimated biomass for 2019 in the **review** is "slightly down." the **review** claims this is remains high comparative to earlier trends, but figure 4 shows massive confidence intervals/error bars which represent there not being a significant difference in biomass estimates across years (the only difference indicated is for the years 2003-2005 where biomass estimates are lower than the other years). the review also states "size composition data from the WCSI trawl survey catches suggest strong recruitment in recent years" but doesn't show any figure quantifying size composition that justify this statement.

Question 20**:** If you do not support any of the options listed, what alternatives should be considered? Why?

57. **Keep TAC at 346 tonnes** until next trawl survey gives a better indicator.
58. OSOF proposes that Fisheries New Zealand should monitor this population to determine if the biomass estimates are increasing.
59. Customary catches need to be recorded so estimates can be included in fisheries modelling. Tangata whenua operating under regulation 50 of the Fisheries (Amateur Fishing) Regulations 2013 is insufficient as they are not required to document their SPO 7 catch. Without customary inputs the model might be overestimating or underestimating TAC allowances.Without customary inputs the model might be overestimating or underestimating TAC allowances.
60. there is no new information and/or recommendations to support changing customary allowances for SPO 7 during this **review**, therefore an increase is unjustified.
61. Recreational fishing 'estimated harvest' in the National Panel Survey of Marine Recreational Fishers might be underestimating the recreational fishing pressure.

Kina SUR 1A and 1B (North East Coast of North Island)

Question 21: Which option(s) do you support for revising the TACs, TACCs and allowances? Why?

62. **Option 2 -** 20% increase in TAC

63. This option is appropriate as the North East Coast of North Island appear to be showing signs of 'urchin barrens,' as stated in the **review.** Worldwide, Sea urchins are widely accepted as playing an important role as habitat formers as if populations are uncontrolled, they over-graze on a kelp species, change community structure, and cause urchin barrens (Vásquez & Buschmann 2006). Urchin barrens can range from 10- 1000 metres, and are characterized by low primary productivity, low species complexity and can have cascading effects on fish and invertebrate populations (Dexter and Scheibling, 2014). These transition to urchin barrens, termed phase shifts, have been observed in New Zealand and have been attributed to a decline in predators, such as snapper (*Pagrus auratus)* and red rock lobster (*Jasus edwardsii)* (Shears et al., 2006). Moreover decline in sea urchin abundance has caused a corresponding increase in kelp forests in Poor Knights Islands MR and Leigh MR, and a subsequent increase in fish and lobster numbers (Shears & Badcock, 2003, Shears et al., 2006).

64. A 2002 report on sea urchin management and a characterisation of NZ kina fisheries recommend fine scale catch per unit effort monitoring of kina catch as the most effective and practical monitoring approach for NZ kina fisheries. The implementation of electronic catch and position monitoring means that this level of monitoring will begin this year.

65. Increase the TAC alongside fine scale catch per unit effort and biomass information from electronic catch and position monitoring before considering increasing the catch limit.

66. Option 2 has not accounted for potential future collapse of sea urchin populations, and this warrants further investigation before increases are considered.

Question 22. If you do not support any of the options listed, what alternatives should be considered? Why?

67. N/A

Question 23. are the allowances for customary fishing appropriate?

68. **Yes** - considering the hand gathering is generally considered a low impact harvesting method, and it is the most common method for collecting kina.

Question 24. are the allowances for recreational fishing appropriate?

69. **Yes** - considering the hand gathering is generally considered a low impact harvesting method, and it is the most common method for collecting kina.

Question 25. are the allowances of other sources of mortality appropriate?

70. No - climate change sea temperature rise, disease are not mentioned as potential sources of mortality and these have been identified as major causes of sea urchin phase shifts worldwide.

Question 26. what other management controls should be considered for both recreational and commercial fishers?

71. Customary and recreational catch data needs to be formalized in surveys. The current data collected is not appropriate to include in statistical analysis as people fail to specify what metric system they are using.

Tarakihi TAR 1, TAR 2, TAR 3, TAR 7 (East coast North and South Island)

Question 27**.** Which option is most appropriate for achieving a rebuild of East Coast tarakihi, taking into account social, cultural and economic factors?

72. **Option 1** - 31% reduction to achieve 40% biomass over 12 years and reductions shared unevenly across QMS areas.
73. This is appropriate as the QMS areas are disproportionate so reductions should be calculated from the size of the QMS. For example TAR 2 (accounts for ~46% of fishery and TAR 3 (accounts for ~33% of fishery) need to have a larger reduction than TAR 1 (accounts ~15% of fishery) and Tar 7 (accounts for ~6% fishery).
74. 1st stage is a 20% reduction in TACC, and the second stage is to implement additional measures as stated in the review. However the **review** state there has been a 25% reduction and this needs to be clarified, as the stocks are currently at 15.9%
75. 31% reduction In stage 2 appropriate as the stock has been below the soft limit of 20% since the early 2000s and has shown a downward trend for the past 30 years.

Question 28: DO you support rebuilding the stock through traditional TAC adjustments (option 1 and 2) or alternative measures in collaboration with industry (option 3) or a combination of the two types of approaches

76. Option 1.

Question 29: Which option proposes the most appropriate rebuild time frame and why?

77. **Option 1.**

Question 30: Is there any other evidence that you feel should be considered in this review and why?

78. N/A

Question 31**:** Which option sets the most appropriate commercial catch limits and why?

79. **Option 1** - 31% reduction to achieve 40% biomass over 12 years and reductions shared unevenly across QMS areas.
80. This is appropriate as 80% of TAC taken from commercial fisheries.
81. Commercial fishing is limited by a Minimum Legal Size of 25cm fork length in all QMS and this is supported by fisheries observers and net restrictions.
82. Reductions in fishing effort for tarakihi will result in an overall reduction in trawl effort in some areas, especially the east coast of the south island where interactions with Hector's dolphin are known to occur. It is therefore likely that a 12 year reduction in trawl effort will benefit the Maui and Hector's dolphin Threat Management Plan Proposals.

Question 32: Are the recreational allowances for East Coast tarakihi appropriate and why?

83. The Recreational allowances and National Panel Survey is not an accurate representation of recreational catch, despite the extensive research that has gone into establishing this survey method (8000 fishers per year, primary sampling of 1000 meshblocks drawn across a randomly selected nation, secondary sampling ~40 households), it still does not provide an accurate representation. Sustainability measures have to be determined through the "best available information" and this needs to be a continuously improving process, continuously taking on new ideas and changes to improve the process. It appears the survey hasn't been re-evaluated in a number of years.
84. Although the Survey may give a reasonable estimate of harvest estimates in tonnes (given the resources), it does not accurately account for the main methods used to manage recreational harvest such as Minimum Legal Size, method restrictions (i.e net restrictions) and daily bag limits. These are managed through on-site surveys such as fisheries officers on boat ramps, ariel over-site surveys to observe boat activity, boat ramp cameras, and chartered vessel reporting. A NIWA survey states that the length of New Zealand's coastline and the number of access points, and the need to measure fishing activity over time make it difficult and prohibitively expensive.
85. This is extremely problematic and poses as an arguably more significant threat than commercial fishing if left unaccounted for.
86. Under all 3 options there are no proposals yo chance the current allowance of recreational fishing.

Question 33: Are the allowances for other sources of fishing mortality appropriate and why?

87. **No** - Legislation needs to be tidied up across QMS areas to ensure accurate representation of customary catch. Customary catch reporting for East coast tarakihi is incomplete, as TAR 1 and Tar 2 are under the Amateur Fishing regulations 2013, which do not require reporting of customary take. In addition, Tar 1,2,3 & 7 may "also be using recreational bag limits to meet their needs" but the review still states that the "information nevertheless suggests that current customary allowances adequately provide for customary take of tarakihi at this time."
88. **No** - Under all 3 options there are no proposals to chance the current allowance of customary fishing.
89. **No** - 10% of commercial TAC is related to fishing mortality (which covers under-reporting) which is a significant issue.
90. **No** - 10% of commercial TAC is related to fishing mortality)which covers death of fish once returned to the sea) which is a significant issue. Mortality has been observed in many mark recapture studies.

Paua PAU 4 (Chatham Islands)

Question 34**:** Which option(s) do you support for setting the TAC, TACC and allowances? Why?

91. **Option 4** – cut the TACC by 30%.

92. This accords with the decision of the Minister of Fisheries in 2017 to set a TAC and lower the TACC by 40% because of concerns regarding the sustainability of the fishery. The Minister's decision has not yet been put into effect owing to now settled legal proceedings brought by the industry against the Fisheries NZ regarding this matter. The industry have demonstrated that they believe the TACC ought to be reduced by 40% through their PAU 4 Fisheries Plan which states that "...[PAU 4 quota owners have committed to]...achieve a level of 40% of ACE shelving (assuming a TACC of 326.543 tonnes)...If the PAU 4 TACC is cut from 1 October 2019 the level of ACE shelving may be reduced in order to achieve a total commercial harvest reduction of 40%."

93. There could be a sustainability risk associated with options 1 – 3. This is because there is a lack of reliable data to effectively quantify the biomass of the fishery. The current status of the fishery in relation to the target biomass is unknown. The best available information is commercial catch and effort data and anecdotal information from fishers. This information suggests that the fishery is declining. As catch per unit effort (CPUE) is the main driver of estimated biomass in paua assessments, these limitations lead to considerable uncertainty about the stock status and trends.

94. OSOF supports option 4 as the most precautionary option due to the considerable uncertainty.

Question 35. If you do not support any of the options listed, what alternative(s) should be considered? Why?

95. N/A

Question 36. Are the allowances for customary fishing appropriate? Why?

96. **Yes** - The maximum reported customary take equates to 1.2 tonnes, therefore the proposed three tonne customary allowance is acceptable providing for current customary harvest levels.

Question 37. Are the allowances for recreational fishing appropriate? Why?

97. Yes - Due to the limited population on the Chatham Islands and its isolation, it is likely that the recreational catch is small. The three tonne allowance that Fisheries NZ proposes is acceptable regarding allowing for current recreational harvest, taking into account recreational effort from fishers that visit the island and the needs of the local community.

Question 38: Are the allowances for other sources of mortality appropriate? Why?

98. **No** - Require that the allowance of two tonnes proposed by Fisheries NZ be reudced to one tonne.. Previous research suggests that incidental mortality of paua from fishing could be approximately 0.3% of the landed catch, which would be less than 1 tonne under each proposed option. Wastage is not an acceptable industry practice, and lenient mortality allowances fail to disincentivise poor industry practices. One tonne is closer to current mortality estimates. It recognises the limitations of current practices, without encouraging wasteful practices.

Question 39: Are there any other management controls that should be considered for the PAU 4 fishery? Why?

99. No additional controls, the current controls are sufficient.

Red Snapper RSN1 and 2 (Entire New Zealand Coast)

Question 40: How will the options proposed here impact the utilisation of the commercial fishery?

100. The commercial fishery would benefit in the long run from an amended and more sustainable version of Option 1 whereby the RSN 1 TACC would be decreased by 60 tonnes and the RSN 2 TACC would remain at the status quo with no increase.

101. Given that no reference or current biomass are known for both RSN 1 and RSN 2, Fisheries NZ needs to assess the results of impending digital monitoring before determining whether a sustainability concern exists or whether the RSN 2 TACC could be increased. It is likely that Fisheries NZ will be able to calculate sustainable catch limits for RSN 1 and RSN 2 once they have these digital monitoring results.

102. Accurate and sustainable catch limits calculated with the assistance of digital monitoring results will be beneficial for the commercial fishery in the long run because they would enable the industry to continue fishing for red snapper in a consistent way in the future rather than having to drastically reduce their catch at some point in the future.

Question 41: If you agree that the TACCs should be adjusted, do you support the proposed level of 60 tonnes or do you suggest a lesser amount? Why? If not, what alternatives should be considered?

103. **OSOF supports an amended version of Option 1** - Decrease the RSN 1 TACC by 60 tonnes and leave the RSN 2 TACC at the status quo level with no increase.

104. The amended Option 1 proposed by OSOF allows time to confirm if a sustainability concern exists before making a decision to increase the RSN 2 TACC and allowances.

105. No reference or current biomass are known for both RSN 1 and RSN 2. Therefore it is not known whether the recent catch levels are sustainable. Red snapper is a low knowledge stock. It is not known what factors influenced the significant decline in catch of RSN 1. The only available information is trends in catch.

106. it is possible that the fact that commercial bycatch of red snapper in RSN 2 has reportedly become a restricting factor in accessing other target fisheries in some areas of north-west Northland due to the low TACC relative to RSN 1 could be being used by Fisheries NZ to justify increasing the TACC for RSN 2 without sufficiently considering the sustainability of an increase.

107. OSOF is concerned about the sustainability of red snapper. This is based on the biological and ecological characteristics of red snapper as a reef fish (which is also found in open water), which may make it susceptible to localised depletion.

108. If a target fishery were to develop which sought out assemblages of red snapper around reef structures, there may be implications in terms of the biological diversity in these areas. Given the biology of red snapper there is a risk that any depletion may be slow to recover.

109. While the roll out of digital monitoring across all commercial fisheries will provide finer scale and more timely information on red snapper catch, the low level of information available in RSN 1 and RSN 2 still presents some risk in terms of the ability to monitor the fishery and assess fishery performance.

110. There are risks associated with making a significant amount of additional RSN 2 annual catch entitlement (ACE) available in that increased fishing effort predominantly in certain areas, may result in localised depletion of red snapper stocks. These risks are exacerbated by the biology of red snapper, which suggests that such depletion would be slow to recover.

Question 42: What other management controls should be considered for both recreational and commercial fishers? Why?

111. Fisheries NZ ought to introduce a commercial and recreational minimum legal size for red snapper in RSN 1 and in RSN 2. This type of control measure does not currently exist.

From:	[redacted]
To:	FMSubmissions
Subject:	Response to Chatham Islands PAU4 Sustainability Review Proposals for 2019/20
Date:	Friday, 2 August 2019 2:03:23 PM
Attachments:	Pau4 Annual Operating Plan 2019_20-final.pdf PAU4 Fisheries Plan January 2019 Approved.pdf FNZ Minister 0219 Plan.pdf PauaMAC 4 submission 2019 sustainability measures.pdf

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Tena koe

…Please find attached a response to the Chatham Islands PAU4 Sustainability Review Proposals for 2019/20 from PauaMAC4 Industry Association Inc.

Document's included

- Submission
- PAU4 Annual Operating Plan
- PAU4 Fishery Management Plan
- FNZ Minister letter approving the Fishery Plan

Nga mihi,

[redacted]

PauaMAC4

Annual Operating Plan

2019/20

Purpose

The Annual Operating Plan (AOP) sets out the non-regulatory fisheries management measures that have been agreed to by PAU4 quota owners and harvesters, in accordance with the Chatham Islands Pāua (PAU4) Fisheries Plan. The AOP is made available to industry participants and Fisheries New Zealand (FNZ), and is also publicly available on request. The AOP implements the Fisheries Plan by providing a record of management measures that will be implemented by industry members in a given year.

PauaMAC4

The PauaMAC4 Industry Association Incorporated (PauaMAC4) was established in 2004 to give the PAU4 quota owners and harvesters a unified organisation to act on their behalf. PauaMAC4 is funded by the Pāua Commodity Levy. Work plans and budgets are voted on by all levy payers prior to the start of each season.

PauaMAC4 provides a forum for discussion among industry participants – including quota owners, ACE holders, harvesters, and Licenced Fish Receivers – before any industry management measures are implemented. The process of discussion and agreement is critical because the management measures in the Fisheries Plan and AOP are non-regulatory. Industry management measures require full understanding and support across industry members to ensure consistent and comprehensive implementation.

Fisheries Plan

During 2018, PauaMAC4 developed a Fisheries Plan on behalf of all PAU4 quota owners and harvesters, with the involvement and support of Iwi, Imi, the Chatham Islands community and FNZ. The Chatham Islands Pāua (PAU4) Fisheries Plan was approved in February 2019 by the Minister of Fisheries under section 11A of the Fisheries Act 1996. The Fisheries Plan focuses on managing commercial harvesting activity and complements other fisheries management initiatives around the Chatham Islands, including customary management measures.

The Fisheries Plan will enable a more responsive, sophisticated and transparent approach to managing commercial harvest in PAU4. The AOP is prepared in accordance with the objectives, strategies and consultation processes set out in the Fisheries Plan. Consultation and engagement with Iwi, Imi and the local community, through the Chatham Islands Fisheries Forum, is vital for the successful implementation of the Fisheries Plan. The structure of the AOP reflects the structure of the Fisheries Plan.

Context for the 2019/20 AOP

In response to concerns about the status of the stock, the Minister of Fisheries reduced the PAU4 TACC by 40% to 196 tonnes from 1 October 2017. PauaMAC4, together with PauaMAC7 and Te Ohu Kaimoana, challenged the Minister's decision in the High Court. Until such time as the proceedings are resolved, the PAU4 TACC remains unchanged at 326.543 tonnes. However, in order to ensure the sustainability of the PAU4 fishstock, PAU4 quota owners agreed to shelve 40% of ACE for 2017/18 and two subsequent years. The ACE shelving commitment is recorded in a memorandum approved by the High Court.

2019/20 is the first year of formal operation of the Fisheries Plan. When approving the Fisheries Plan, the Minister of Fisheries indicated that PAU4 would be reviewed in the 2019 sustainability round. The review provides an opportunity for PAU4 quota owners, and others with an interest in the fishery, to help

determine an appropriate long-term TACC for the fishery, within which the provisions of the Fisheries Plan can operate effectively.

PAU4 fishery statistics

PAU4 TACC	326.543 tonnes
Capital value of PAU4 fishery	$97.96 million
Number of quota owners	61
Number of NZQA approved persons	45
Number of ACE holders	43
Number of divers	25
Number of vessels	20
PAU4 processing plants	4

Summary of AOP Management Measures for 2019/20

Objective 1: Timely adjustments to commercial harvest levels, based on reliable information

Fisheries Plan	*AOP Management Measures*
1.1 Comprehensive harvest information	Data loggers: All harvest crews will deploy data loggers and download data daily. For details, see **PIC Datalogger Guidelines**
	Catch sampling: All harvest crews will complete at least one shell sample every dive event. For details, see **Appendix 2**
1.2 Harvest control rule	PauaMAC4 will determine the level of commercial harvesting using informed judgement based on: • Diver-provided information and an assessment of historical catches in sub-areas of the fishery; • The industry's commitment to shelve 40% of ACE in 2019/20; and • An understanding that the PAU4 stock will be reviewed by FNZ in 2019/20 and that PauaMAC4 will have input to the options proposed by FNZ
1.3 ACE Shelving	PAU4 quota owners will achieve a level of 40% ACE shelving (assuming a TACC of 326.543 tonnes) If the PAU4 TACC is cut from 1 October 2019, the level of ACE shelving may be reduced in order to achieve a total commercial harvest reduction of 40%
1.4 Diver information	Harvest crews will provide feedback on the state of the fishery, biosecurity, possible disease events, and any issues regarding the fishery
	PauaMAC4 will incorporate information provided by the Harvesters Forum into decision-making

Objective 2: Supporting and enhancing the sustainability of the pāua fishery

Fisheries Plan	*AOP Management Measures*
2.1 Effort spreading	Harvest crews, ACE holders and quota owners will use best endeavours to comply with the sub-area targets set out in **Appendix 1**
	PauaMAC4 will monitor sub-area catch using the PAU4 Dashboard website
	PauaMAC4 will undertake an in-season review of sub-area targets in December 2019
	A sub-area will be immediately closed to all commercial harvesting if the sub-area catch level reaches 100% of the sub-area target
2.2 Spawning opportunity	Growth and length at maturity project: PauaMAC4 will recover the previous year's tagged pāua and tag pāua in at least two new sites

	All harvest crews and LFRs will monitor pāua spawning times
	Seasonal spawning closure: There will be no commercial harvesting for the months of August and September
	Variable minimum harvest size**:** All commercially harvested pāua, for all harvest methods, will be no smaller than the minimum harvest size (MHS) specified in **Appendix 1**
2.3 Fishery enhancement	PauaMAC4 will translocate a minimum of two sites to establish spawning banks and/or to move pāua to areas that allow for further growth to MHS
	PauaMAC4 will translocate 'at risk' pāua, pāua which are threatened by environmental effects as required
2.4 Habitat of particular significance for fisheries management	PauaMAC4 will start work on identifying areas of the PAU4 fishery that are of particular significance for fisheries management (HPSFM), including areas that are particularly important for juvenile growth

Objective 3: Improving industry performance

Fisheries Plan	*AOP Management Measures*
3.1 Professional and responsible harvest crews	All harvesters will comply with PauaMAC4's general operating procedures and best practice rules (**Appendix 2**), including procedures relating to: • Catch sampling • Harvesting, handling and landing of pāua • Biosecurity • Protecting the fishery from theft • Recreational take by commercial operators • Commercial use of Underwater Breathing Apparatus (UBA) • Access over private property • Shark incident reports
3.2 Quota owner responsibility	All PAU4 quota owners will: • Place conditions on ACE requiring harvesters to comply with all industry rules in the AOP • Enforce ACE conditions by withholding ACE from harvesters who fail to comply with the industry rules

Objective 4: Community engagement

Fisheries Plan	*AOP Management Measures*
4.1 Community Forum	PauaMAC4 will participate in the Chatham Islands Fisheries Forum, together with Iwi, Imi, recreational fishers and other community and agency representatives

Appendix 1: PAU4 Statistical areas annual harvest caps and minimum harvest sizes for 2019-20 fishing year

Chatham Stat area	Minimum harvest size mm	Capped amount KG
401	0	0
402	127	3000
403	0	0
404	127	4000
405	127	5000
406	130	3000
407	130	1000
408	130	1000
409	140	2000
410	140	2000
411	127	5000
412	127	20 000
413	0	0
414	132	5000
415	140	4000
416	132	3000
417	132	1500
418	140	1000
419	127	5000
420	127	3000
421	127	3000
422	127	7000
423	140	4000
424	0	0
425	127	6500
426	127	3000
427	127	2000
428	127	4000
429	127	1000
430	127	1000
431	127	3000
432	130	6000
433	130	7000
434	130	9000
435	130	10 000

436	130	4000
437a	127	3500
437b	132	3500
438	127	2000
439	0	0
Pitt Stat area	**Minimum harvest size mm**	**Capped amount KG**
440	140	3000
441	140	7000
442	140	2000
443	140	4000
444	132	2000
445	132	5000
446	132	1000
447	140	2000
448	140	4000
449	132	5000
450	132	4000
451	0	0
452	132	1000
453	132	2000
454	0	0
455	132	1000
456	0	0
457	132	5000
458	0	0
	TOTAL	**196000 kg**

Stat area **minimum harvest size** by colour

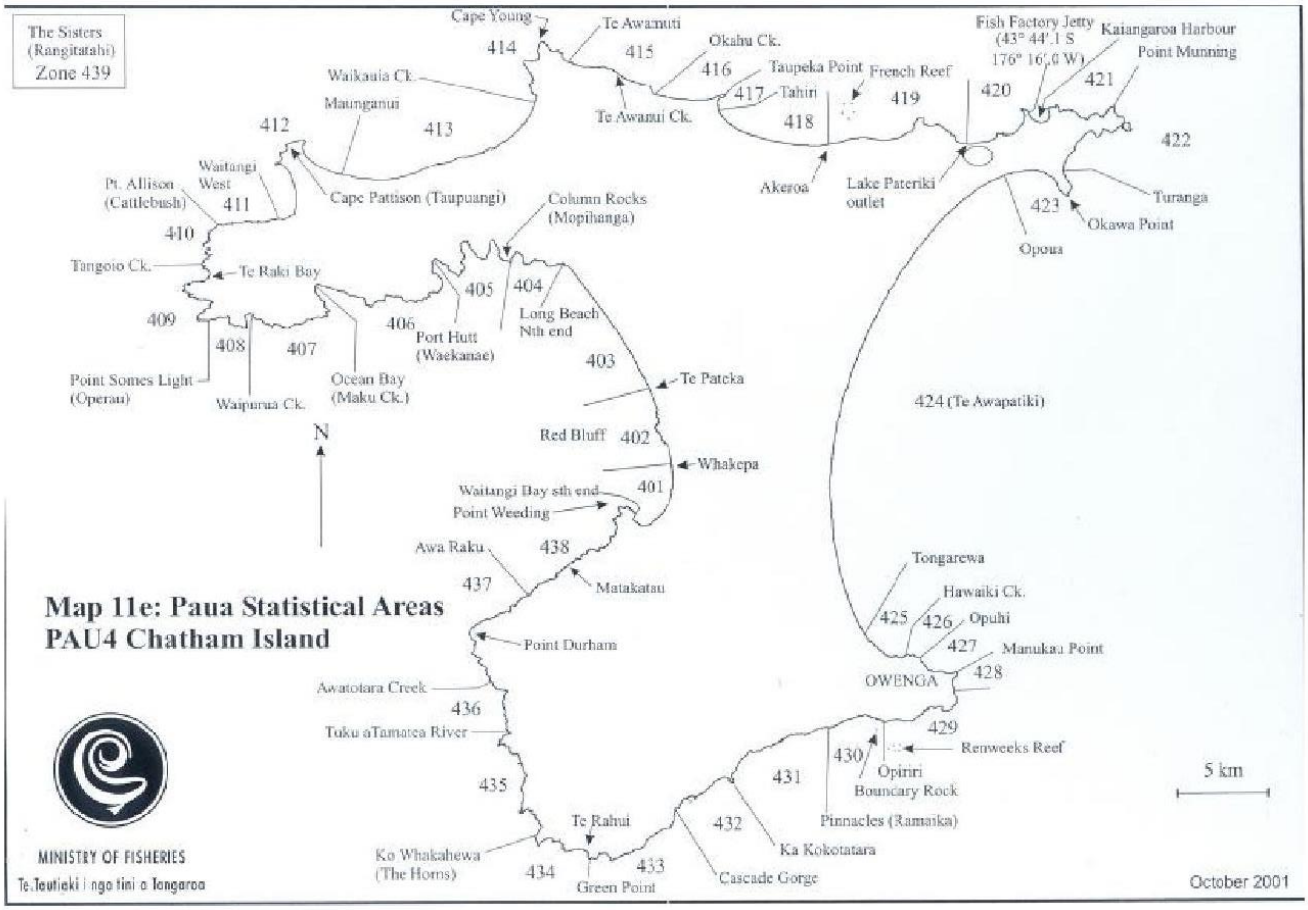
Zero cap- nil harvesting

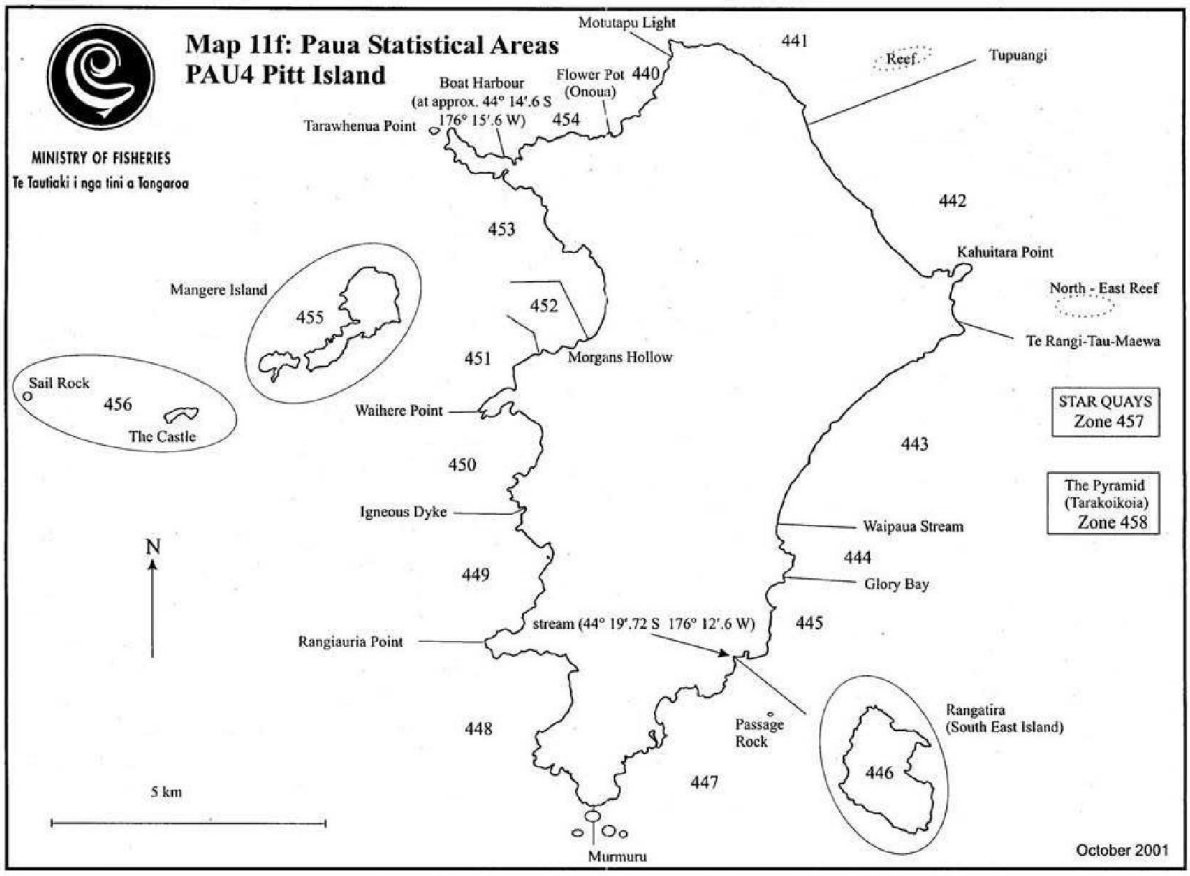
127mm

130mm

132mm

140mm


The Sisters (Rangitatahi) Zone 439
Cape Young
Te Awanuti
Okahu Ck.
Waikaula Ck.
Maunganui
Te Awanui Ck.
Taupeka Point
French Reef
Tahiri
Fish Factory Jetty (43° 44'.1 S 176° 16'.6 W)
Kaiangaroa Harbour
Point Munning
Waitangi West
Pt. Allison (Cattlebush)
Cape Pattison (Taupuangi)
Column Rocks (Mopihanga)
Akeroa
Lake Pateriki outlet
Turanga
Okawa Point
Opoua
Tangoio Ck.
Te Raki Bay
Port Hutt (Waekanae)
Long Beach Nth end
Point Somes Light (Operau)
Waipurua Ck.
Ocean Bay (Maku Ck.)
Te Patoka
424 (Te Awapatiki)
N
Red Bluff
Whakepa
Waitangi Bay sth end
Point Weeding
Awa Raku
Matakatau
Tongarewa
Hawaiki Ck.
Opuhi
Manukau Point
Point Durham
OWENGA
Awatotara Creek
Tuku aTamatea River
Renweeks Reef
Opiriri
Boundary Rock
Pinnacles (Ramaika)
Ka Kokotatara
Te Rahui
Ko Whakahewa (The Horns)
Green Point
Cascade Gorge
5 km
Map 11e: Paua Statistical Areas
PAU4 Chatham Island
MINISTRY OF FISHERIES
Te Tautiaki i nga tini a Tangaroa
October 2001


Map 11f: Paua Statistical Areas
PAU4 Pitt Island
MINISTRY OF FISHERIES
Te Tautiaki i nga tini a Tangaroa
Motutapu Light
Reef
Tupuangi
Boat Harbour (at approx. 44° 14'.6 S 176° 15'.6 W)
Flower Pot (Onoua)
Tarawhenua Point
Kahuitara Point
North - East Reef
Te Rangi-Tau-Maewa
Mangere Island
Morgans Hollow
Sail Rock
The Castle
Waihere Point
STAR QUAYS Zone 457
The Pyramid (Tarakoikoia) Zone 458
Igneous Dyke
Waipaua Stream
Glory Bay
N
stream (44° 19'.72 S 176° 12'.6 W)
Rangiauria Point
Passage Rock
Rangatira (South East Island)
5 km
Murmuru
October 2001

Appendix 2: General Operating Procedures and Best Practice Rules

This Appendix contains detailed procedures relating to:

1. Catch sampling
2. Harvesting, handling and landing of pāua
3. Biosecurity
4. Protecting the fishery from theft
5. Recreational take by commercial operators
6. Commercial use of Underwater Breathing Apparatus (UBA)
7. Access over private property
8. Shark incident reports

1) Catch Sampling

The on-going collection of shell length frequency data in similar proportions to fishing effort is important for stock assessments. This is required science information and is carried out under contract by the Pāua Industry Council.

It is important to separate UBA and free dive samples, so please mark on the form if “UBA used”.

Harvest crews should tag one bin during every dive event, with the red sack sampling kit to be attached to it. The “red sack” catch sampling kits only take a few moments to fill in and are available from Colleen Clearwater (305 0319) or PIC shell sampling contractor Eileen Cameron (305 0310).

A “dive event” should be based on a statistical area. The more information we have on each stat area the better. However, if within a stat area the paua are distinctly different (i.e. fast growing paua on the headlands and slow growing stunted stock in sheltered parts of the area) then please do a sample of each.

If you are harvesting for live export please continue to sample as per normal i.e. tag a bin and fill out the white sheet as per the “dive event” recommendation’s above.

2) Harvesting, handling and landing pāua

Landing of paua

- Fish need to be landed to an LFR the same day the fishing event has taken place.
- Harvesters should ensure the maximum weight of any bin is 30kgs
- Paua are to be stacked two layers high with their vent holes up
- Paua should be landed in a 'Live Condition’. The definition of a Live Condition being 'when the foot is touched it will show active movements if upside down'.

Risk mitigation protocols for landing pāua and **Paua harvesting and handling guidelines** are downloadable from the PIC website – www.paua.org.nz

3) Biosecurity

Wild pāua populations are vulnerable to pests and diseases. The impact of pests and diseases can be mitigated by the swift actions of harvesters.

- Harvesters or LFRs who see anything untoward should report it immediately to the Pāua Industry Council – for example, unusual plant or animal species such as unfamiliar starfish, or unusual numbers of dead animal species;
- If dead or dying pāua are seen, **harvesting should immediately be stopped** for the day at the affected site. A few of the affected pāua should be gathered and sealed in plastic bags, kept separate from catch and frozen on return to port. Contact PIC immediately and/or MPI Compliance so they can arrange transport to a diagnostic testing facility, reporting to MPI and organise follow up inspection of affected sites.

Contact details:	
Gary Cameron	03 3050310
Jeremy Cooper	027 4323 041
Storm Stanley	027 6531 073

4) Protecting the fishery from theft

If you observe something suspicious phone **305 0004**. If the Chathams' office is unattended your call will be put through to an operator who can get hold of MPI Compliance. This phone number is manned 7am to 9pm in the summer and slightly less hours in winter. Your information will be treated as confidential.

MPI Compliance like receive information about fish thieves as and when it's happening so don't leave it until a week later to mention it to them. They are not concerned if several people tell them the same thing – it's all good. Don't assume MPI know everything that's happening out there – they are often the last to find out things just because everyone presumes they would have already heard. PauaMAC4's policy is to support MPI in their compliance work.

If you see or hear of fishing activity that you think might be illegal – either ring the 0800 4 POACHER number, contact your local MPI Compliance office, or pass the details on to PIC.

DON'T SLEEP ON IT – DO IT IMMEDIATELY

5) Recreational take by commercial operators

Recreational catch cannot be taken on a registered commercial fishing vessel unless the appropriate approval has been obtained. There are two types of approvals, and applications for both types are made under section 111 of the Fisheries Act (commonly referred to as '111 Approvals').

- A **General Approval** permits a commercial fisher to fish recreationally <u>while</u> commercial fishing. Any recreational catch must be recorded;
- A **Particular Approval** allows a commercial fisher to use a commercially registered vessel for recreational fishing when <u>no</u> commercial fishing is occurring. No recording of recreational catch is required.

Applications for 111 Approvals must be made to MPI Compliance several days in advance of the planned fishing trip. Approvals must be carried on board the vessel.

6) Commercial use of UBA

The use of UBA for the commercial harvest of pāua in PAU4 is regulated under fisheries regulations. **Any diver wishing to use UBA in the PAU4 fishery is responsible for ensuring their own compliance with the Fisheries Act 1996 and all requirements under the Health and Safety at Work Act 2015.** For further details, contact PauaMAC4 or see:

- Fisheries (Commercial Fishing) Regulations 2001, regulation 76A http://www.legislation.govt.nz/regulation/public/2001/0253/latest/DLM78049.html#DLM78049
- WorkSafe: https://worksafe.govt.nz/topic-and-industry/occupational-diving/occupational-diving-certificate-of-competence-application/

In summary:

- A commercial diver cannot use UBA, and cannot have UBA on a vessel, when taking fish, aquatic life, or seaweed other than the species specified in the regulation;
- UBA cannot be used for shore-based diving;
- No recreational pāua catch should be taken on any date where UBA has been used by any member of the dive team; and
- Any diver who intends to use UBA to harvest pāua must hold an Occupational Diving Certificate of Competence issued by WorkSafe.

7) Access over private property

PauaMAC4 is committed to working closely and constructively with others to ensure the long-term potential of the pāua fishery. Landowners in the PAU4 fishery have generally been willing to grant permission for harvesters to cross private land to gain access to parts of the coastline. This code of practice aims to guide standards for reasonable and responsible behaviour by harvesters in order to sustain the goodwill of private landowners.

Background

In NZ there is no right of legal access across private land. Owners of private land have an inherent right of exclusive occupation and enjoyment of that land. This right is enforceable by the provisions of the Trespass Act 1990. For most harvesters, access across private land is provided for by informal agreements allowing access to beaches on a case-by-case basis. It is the prerogative of the landowner to refuse access to land at any point even if such access may have been 'traditional' and the request seems to be reasonable. It is therefore important that pāua harvesters, who cross private property while gaining access to parts of the coastline, respect other people's property.

Obtain permission

Do not presume that you have automatic permission to cross private land. Be polite! Seek permission for you, your crew and any vehicles and trailers to cross private land. Contact should be made at a reasonable hour. Recognise access is a privilege not a right.

Respect other people's property

- Follow any requests/conditions made by the landowner.
- Leave gates as they are found – open or closed.
- Do not block or obstructing gateways, tracks or entrances.
- Keep to formal tracks.
- If you damage other people's property report it and fix it (or organise the fixing of it) as soon as possible.
- Keep away from stock, especially during calving or lambing.
- Report to the land owner/manager any stock that is in difficulty, any damage or anything suspicious.

Take responsibility for your own actions

A farm is a working environment and hazards exist. Make sure you are aware of these; take care of yourself and others with you.

Respect the interests of others

- Respect the needs of other people enjoying or working in the outdoors and follow any reasonable advice from land owners/managers.
- Respect people's privacy and peace of mind.
- Avoid causing alarm to people, especially in early morning or late evening, by keeping a reasonable distance from houses etc.

Respect the environment

- Take all your rubbish home and consider picking up other litter as well.
- Don't disturb wildlife.
- Respect wāhi tapu and historic places.

You only have access rights if you exercise them responsibly.
Don't abuse it – appreciate them.

8) Shark incident reports

Anecdotal information from divers is that the shark population is increasing; sharks are congregating closer to shore and are being encountered more frequently. To maintain a record of incidents, divers are asked to complete a shark incident form (copies available from Colleen or Gary). Divers are also asked to share information on shark presence by informing Colleen so a record can be kept, and action taken, for example alerts issued, if required.

CHATHAM ISLANDS PĀUA

PAU4 FISHERIES PLAN

JANUARY 2019

Contents

Part One: Introduction

Context

Pāua on the Chatham Islands is highly valued by customary, commercial and recreational fishers. The commercial fishery is managed under the Quota Management System as PAU4, comprising blackfoot pāua (*Haliotis iris*) and yellowfoot pāua (*H. australis*). Although quantitative information on the stock status of PAU4 is limited, the fishery is considered to be relatively productive and abundant. In recent years, however, the pāua industry has observed that the total biomass of PAU4 appears to be declining and some areas of the fishery are experiencing depletion. In response to these concerns, since 2010 quota owners have reduced commercial harvest by voluntarily shelving annual catch entitlement (ACE). The PAU4 industry now intends to adopt more sophisticated management measures using a fisheries plan approved by the Minister of Fisheries under section 11A of the Fisheries Act 1996.

Scope

The fisheries plan is being developed by industry representative body PauaMAC4 on behalf of all PAU4 quota owners and harvesters, and with the involvement and support of Iwi, Imi, the Chatham Islands community and Fisheries New Zealand (FNZ). The plan focuses on managing commercial harvesting activity and is intended to complement other fisheries management initiatives around the Chatham Islands, including customary management measures.

Unlike other fisheries plans prepared under the Fisheries Act, the PAU4 Plan sets out actions that will be undertaken primarily by the fishing industry (PAU4 quota owners, ACE holders, harvesters and Licensed Fish Receivers (LFRs)). The measures in the plan are intended to complement and integrate with FNZ's fisheries management functions.[1]

Management Approach

The PAU4 Plan is based on fine-scale, timely, and adaptive management responses. This management approach is well suited to the PAU4 fishstock for the following reasons:

- The sustainability and abundance of sedentary species such as pāua depends primarily on local conditions and local fishing effort rather than on stock-wide factors. A spatially-explicit management approach that builds upwards from small-scale stock units is therefore more appropriate than the typical 'top-down' management approach implemented at the scale of the PAU4 Quota Management Area (QMA). The basic unit of management adopted in the PAU4 Plan is the 57 PAU4 statistical areas;
- Real-time management responses are simply not possible in fisheries that are managed using periodic stock assessments and TACC adjustments. However, information about the PAU4 stock is visible to harvesters and can be captured by industry data recording systems. This real-time

[1] FNZ's fisheries management approach is set out in the Draft National Fisheries Plan for Inshore Shellfish (July 2011). Integration with FNZ management measures is addressed in Part Three of the PAU4 Plan.

information can be readily incorporated into management responses for PAU4 on an annual basis as well as during the fishing season;

- An adaptive management approach enables management measures to evolve in response to:
    - Improvements in the quantity and quality of information about the PAU4 stock – for example, harvest control rules will become more sophisticated as information is gathered on abundance trends at a fine spatial scale;
    - Improvements in the sophistication of industry management tools – for example, many of the measures in the plan will initially be implemented on a voluntary basis but, in time, statutory support for industry management initiatives is anticipated to provide higher levels of certainty for all fisheries stakeholders.

The PAU4 Plan operates within FNZ's management settings – i.e., within the constraints of the TACC and current regulatory settings such as the Minimum Legal Size (MLS). The two main management tools utilised in the Plan are:

- Restriction of fishing effort within the TACC using the mechanism of ACE shelving (for an explanation of ACE shelving see Part Three of the Plan); and
- Control of fishing activity at a sub-QMA level, including catch spreading, variable minimum harvest sizes and enhancement of local pāua populations.

Annual Operating Plan

The PAU4 Plan provides an enduring framework for managing the fishery, but the operational management measures will be set and reviewed annually in the PauaMAC4 Annual Operating Plan (**AOP**). The AOP will be prepared using the following process and will be publicly available.

Year 1	Action	Responsibility
From 1 October	Implement Year 1 management measures	PAU4 industry
March	Assess Year 1 fishing activity, stock status and trends	Harvesters' Forum
	Set provisional measures for AOP Year 2 (using best available information, including from Harvesters' Forum)	PauaMAC4 Executive
April, May	Engage and consult with PAU4 quota owners, harvesters, Iwi, Imi, Chatham Islands community, and FNZ	PauaMAC4 Executive
June	PAU4 sign-off on management measures for Year 2 AOP	PauaMAC4 AGM
	Provide AOP to FNZ	PauaMAC4 Executive
July	Forward ACE shelving put in place for Year 2	PAU4 quota owners
	Provide report to FNZ on level of shelving achieved	PauaMAC4 Executive

Part Two: Objectives, Strategies and Actions

Objectives

Objective 1: Timely adjustments to commercial harvest levels, based on reliable information.

Objective 2: Support and enhance the sustainability of the pāua fishery.

Objective 3: Improve industry performance.

Objective 4: Community engagement.

Strategies and Actions

Strategies for timely adjustments to commercial harvest levels, based on reliable information

Strategy 1.1 Comprehensive harvest information: Improve the comprehensiveness and accuracy of harvest information by implementing the following actions:

1.1.1 Require 100% data logger use.

1.1.2 Require at least one shell sample every dive event.[2]

1.1.3 Make use of data from FNZ's electronic monitoring and reporting system.

Explanation: Timely, fine-scale, verifiable harvest information forms the cornerstone of the management approach in the PAU4 Plan. This information, currently collected voluntarily using data loggers, will be further supported by the introduction of electronic catch and location reporting requirements.

Strategy 1.2 Harvest control rule: Develop and implement a harvest control rule (decision rule) for adjusting commercial harvest levels in PAU4 based on comprehensive harvest information.

1.2.1 Specify the harvest control rule in the Annual Operating Plan.

Explanation: A harvest control rule is a pre-agreed guideline that determines how much fishing can take place, based on indicators of stock status. The PAU4 harvest control rule will evolve as better fine-scale information on the status of the fishery is obtained. Initially, the harvest control rule takes the simple form of sub-area targets based on informed judgement and an assessment of historical catch levels. In time, a more sophisticated approach based on catch per unit effort (CPUE) may be utilised. The harvest control rule may apply at the level of the QMA or sub-areas within the QMA (which can be summed to obtain an overall limit for commercial harvest).

Strategy 1.3 ACE shelving: Control the level of commercial harvest in PAU4 by the following actions:

1.3.1 Shelve 40% of ACE in 2018/19 in accordance with Court direction.

[2] The definition of a "dive event" will be included in the Annual Operating Plan.

1.3.2 Maintain at least 40% ACE shelving for at least one further year to assist the rebuild of the fishery.

1.3.3 Review the level of ACE shelving on an annual basis, adjust when necessary using a harvest control rule, and specify the required level of shelving in the Annual Operating Plan.

1.3.4 Explore options to increase the security of forward ACE transfers and ensure that the burden of ACE shelving is apportioned equitably on the basis of quota ownership.

Explanation: Shelving is a secure and responsive way of managing commercial harvest levels within the PAU4 fishery on an annual basis. The timing of the development of the AOP allows the Minister to take into account the fisheries plan, the AOP, and the effect of shelving on the PAU4 stock when considering sustainability measures for the new fishing year.

Strategy 1.4 Diver information: Incorporate diver-provided information into decision-making.

Explanation: Information provided by divers, including anecdotal information and formal local-area abundance surveys undertaken by divers, is relevant to all the management measures in the AOP.

Strategies for supporting and enhancing the sustainability of the pāua fishery

Strategy 2.1 Effort spreading: Reduce the risk of serial depletion by implementing the following actions:

2.1.1 Set harvest targets for sub-areas within the PAU4 QMA (which may include setting targets of zero for areas subject to local depletion) based on:
- the previous five years of catch reporting data; and
- information from the Harvesters' Forum.

2.1.2 Monitor actual sub-area catch on a timely basis using the PAU4 Dashboard website.

2.1.3 Implement in-season closures of sub-areas if catch levels reach a specified threshold within or above the sub-area target.

2.1.4 Review sub-area targets, closures, and thresholds on an annual basis and specify in the Annual Operating Plan.

Explanation: Sub-area targets help spread fishing effort and manage the risk of local depletion. Targets will initially be set at the scale of statistical areas, but adjustments may be made to the scale of management in future years by combining statistical areas into larger strata. Sub-area targets may be fished on a competitive basis, or may be implemented by assigning a proportion of ACE to each sub-area and allowing trade between ACE holders. Threshold levels may be adjusted annually to establish more flexible or precise spreading of catch (e.g., a threshold of 150% allows more flexibility than closing an area when 100% of the target is caught).

Strategy 2.2 Spawning opportunity: Protect and enhance pāua spawning opportunity by implementing the following actions:

2.2.1 Research and monitoring:

- Tag pāua in at least two sites per year for the PAU4 Growth and Maturity project; and
- Monitor spawning times using information from harvesters and LFRs.

2.2.2 Minimum Harvest Size (MHS) adjustments:

- Specify one or more area-based MHS in the Annual Operating Plan;
- Review and adjust the MHS at an appropriate spatial scale in response to the results of the relevant research.

2.2.3 Seasonal spawning closure:

- Specify the spawning period closure in the Annual Operating Plan.

Explanation: Adjusting the MHS above the MLS of 125mm allows additional spawning events before pāua become available for harvest. The results of research on fine-scale spatial variation in length at maturity, spawning behaviour, and the optimal number of spawning years will be used to set and adjust the spawning-related rules in the AOP. MHS provisions may apply at the scale of each main island (Chatham or Pitt) or at a smaller spatial scale. The appropriate scale of management will be influenced by the suitability of monitoring and enforcement regimes. If a single MHS is set for a large area, innovative arrangements may be adopted to facilitate catch spreading within the area (e.g., by reducing, for a short period of time, the MHS in sub-areas where the pāua are between the MLS and MHS). The spawning closure is anticipated to run from July to September inclusive, but dates may vary on a sub-area basis and may be adjusted in-season depending on information on actual spawning activity.

Strategy 2.3 Fishery enhancement: Implement translocation and reseeding programmes, including the following actions:

2.3.1 Translocate at least two sites each year to establish spawning banks/founder populations in areas subject to localised depletion that previously supported strong pāua populations.

2.3.2 Translocate stunted stock to areas that allow for further growth to MHS.

2.3.3 Implement reseeding where this is practical and justified by analysis of costs and benefits.

Explanation: Translocation and reseeding programmes can be used to target particular areas of the fishery where these techniques will help improve local abundance. The performance of these methods of fisheries enhancement will initially be trialed, monitored and assessed prior to broader implementation. The sustainability of pāua stocks in all areas is paramount, including areas where pāua are sourced for translocation.

Strategy 2.4 Habitat of particular significance for fisheries management (HPSFM): Protect HPSFM for pāua by implementing the following actions:

2.4.1 Identify areas that are HPSFM, including areas that are particularly important for pāua spawning and juvenile growth, and note identified HPSFM in the Annual Operating Plan.

2.4.2 Work with Iwi, Imi and the Community Forum to ensure that HPSFM are protected from adverse effects of fishing and non-fishing activities, including activities managed under other legislation such as the Resource Management Act 1991 (RMA).

Explanation: Fisheries Act section 9(c) requires that habitat of particular significance for fisheries management should be protected. Other marine and terrestrial activities can have adverse effects on pāua habitat – for example, the discharge of sediment from land disturbance or the erection of coastal structures. A fisheries plan approved under section 11A of the Act has status under other legislation, including the RMA, enabling an integrated, multi-agency approach to protecting areas that are critical for sustaining healthy pāua populations.

Strategies for improving industry performance

Strategy 3.1 Professional and responsible harvest crews: Improve the performance of harvest crews by the following actions:

3.1.1 Require all harvesters to comply with PauaMAC 4's general operating procedures and best practice rules, including procedures related to:

- Harvesting and handling of pāua
- Landing of pāua
- Biosecurity
- Protecting the fishery from theft
- Recreational take by commercial operators
- Use of data loggers
- Commercial use of Underwater Breathing Apparatus (UBA)
- Access over private property
- Shark incident reports

3.1.2 Implement and maintain a regular harvester training programme covering matters such as best pāua handling practice, data logger use, and compliance with industry and government rules.

Explanation: Good harvesting practice builds on existing industry practices, and is an essential component of effective management of the PAU4 fishery.

Strategy 3.2 Quota owner responsibility: Foster quota owner responsibility for harvest crew performance by implementing the following actions:

3.2.2 Obtain agreement from PAU4 quota owners to:

- Place conditions on ACE requiring harvesters to comply with all industry rules in the Annual Operating Plan;
- Enforce ACE conditions by withholding ACE from harvesters who fail to comply with the industry rules.

3.2.3 Encourage the use of multi-year ACE commitments by quota owners so that harvesters have the security of a longer-term interest in the fishery.

Explanation: The effective enforcement of quota owner-imposed ACE conditions is a critical aspect of ensuring compliance with industry-initiated management measures. Multi-year ACE arrangements (e.g., 3 to 5 years) improve incentives for harvester performance.

Strategy 3.3 Industry capability: Maintain and build the necessary capacity and expertise to support the Chatham Islands pāua fishery by implementing the following actions:

3.3.1 Ensure PauaMAC4 continues to be appropriately resourced.

3.3.2 Maintain and expand a group of local divers who have 'scientific diver' certification.

Explanation: The continued development and implementation of the Plan requires a credible, properly resourced industry representative body with access to appropriate financial support, skills, experience, and locally-based scientific input, both now and into the future.

Strategy 3.4 Implementing industry rules with certainty: Work with the Pāua Industry Council and the Chatham Islands Fisheries Forum to advocate for the establishment of a statutory delegated decision making capacity on the Chatham Islands to enable quota owners to make binding industry rules within government-set standards – potentially as a pilot programme for 'Authorised Management' (described in Part Three of the Plan), acknowledging that this would require legislative change.

Explanation: While the management measures in the Plan can be implemented on a voluntary basis by the PAU4 industry, there may be some industry participants who seek to benefit from the measures without contributing to them. Statutory tools to support full compliance with industry management measures approved by a super-majority of quota owners will help improve certainty for quota owners, harvesters, the Chatham Islands community and the Government.

Strategies for community engagement

Strategy 4.1 Community Forum: Encourage an active community management approach to the Chatham Islands' fisheries by establishing and participating in a Chatham Islands Fisheries Forum, together with Iwi, Imi, recreational fishers and other community and agency representatives.

Explanation: The Community Forum is a mechanism for engagement of all those with an interest in the Chatham Islands fisheries. For PAU4, the Forum is an opportunity to help inform the community of the PAU4 Plan, seek support for industry management measures, and integrate the PAU4 Plan with other fisheries management initiatives on the Chatham Islands.

Part Three: Implementation, monitoring and review

Implementing the measures in the Plan

The annual measures that will be implemented by the PAU4 industry will be set out in the PauaMAC4 AOP, as described in Part One of the Plan.

The Plan's strategies and actions enable the implementation methods to evolve or change over time. At any one time a mix of the following implementation mechanisms may be in use:

- **ACE shelving** – Prior to the start of the fishing year, PAU4 quota owners transfer the specified percentage of ACE to a non-fishing entity – i.e., to PauaMAC4's account on the publicly-accessible ACE register maintained by FishServe. ACE that is shelved cannot be fished during that year. The process is repeated every year that the shelving is in place. The security of this method of ACE shelving has been demonstrated by PauaMAC4 over the past seven years. ACE shelving requires a high level of support from quota owners in order to achieve the specified level of catch reduction;
- **Industry rules** – Non-regulatory measures that are agreed to and implemented by industry members on a voluntary basis (e.g., rules relating to area closures or the use of data loggers);
- **Regulations** – Some measures in the Plan can be implemented via regulations made under the Fisheries Act – e.g., electronic catch and position reporting; and
- **Authorised management** – A management tool that PauaMAC4 and the seafood industry are advocating be made available in the future, which would require amendments to be made to the Fisheries Act.[3] Under authorised management, a group of quota owners would be authorised by the Minister of Fisheries to purchase specified fisheries services and perform specified management functions for the commercial share of a fishery within government-set standards. The quota owners would use a statutory decision making tool to make rules by super-majority, subject to statutory checks and balances to prevent inappropriate behaviour. The rules would bind all quota owners and commercial harvesters in a fishery so as to provide FNZ and fisheries stakeholders with confidence that industry management measures will be implemented in a transparent and enforceable manner.

  The PAU4 industry is already implementing the types of initiatives that would be possible under authorised management (e.g., ACE shelving and industry rules about fine-scale management). However, authorised management would enable more efficient implementation of the strategies in the Plan by simplifying processes for agreeing on industry rules, making rules enforceable and removing the 'free rider' effect whereby quota owners or harvesters are able to benefit from industry management measures without participating in them.

[3] Authorised management is described in detail in the Initial Seafood Industry Contribution to Fisheries Management Review 2015/16 *Creating Value 'Beyond Sustainability'* (December 2015).

Performance measures and monitoring

The PAU4 Plan has five performance measures which are set out below.

Performance will be monitored by the PauaMAC4 Executive and by FNZ on an ongoing basis.

	Performance measure	Monitoring mechanism
1	The AOP is prepared according to the requirements of Plan	FNZ receives the AOP by the due date and the AOP covers the measures specified in Plan
2	The level of ACE shelving specified in the AOP is consistent with Fisheries Act requirements for ensuring stock sustainability[4]	PauaMAC4 and FNZ share information on PAU4 stock sustainability and discuss AOP specifications before June each year
3	The specified level of ACE shelving is achieved by 31 July each year	PauaMAC4 monitors the level of ACE shelving using the quota register and reports the level of shelving achieved to FNZ
4	Industry compliance with industry rules in the AOP is sufficient to ensure the integrity of the management measures	PauaMAC4 monitors compliance with industry rules using information from harvesters and LFRs, data loggers and the PAU4 Dashboard website FNZ monitors electronic catch and position reporting
5	Community support for the Plan	PauaMAC4 and FNZ monitor community views through direct liaison with Iwi, Imi and the Chatham Islands Fisheries Forum

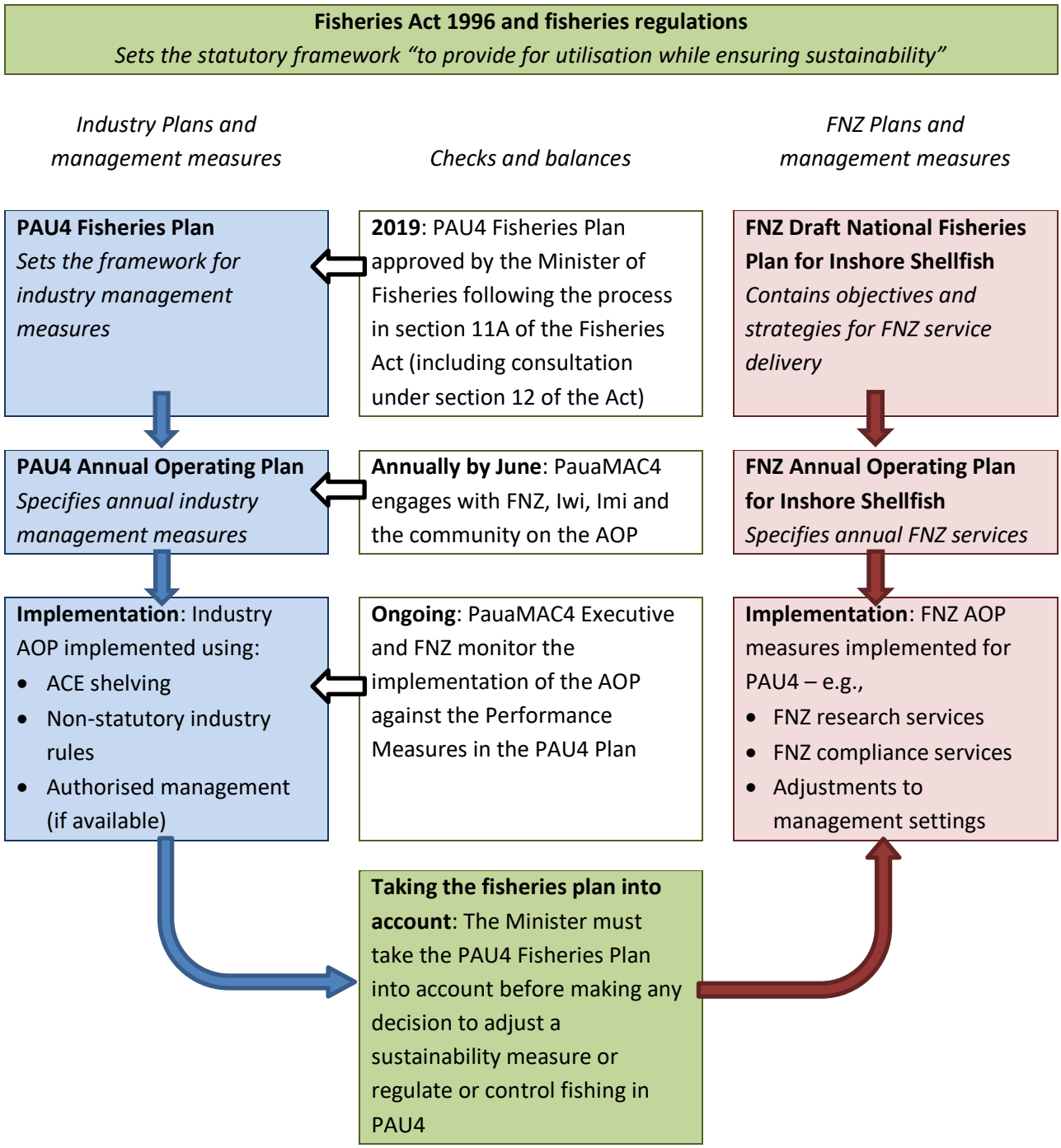
Review

PauaMAC 4 will review the PAU4 Fisheries Plan after the Plan has been in place for five years. The review will be undertaken in consultation with FNZ, Iwi and Imi, and the Chatham Islands Fisheries Forum.

[4] These requirements are set out in Fisheries Act sections 11 and 13.

Integrating the Fisheries Plan with FNZ management measures

The PAU4 Fisheries Plan aligns with and complements FNZ's management services for PAU4, as shown in the diagram below.



Hon Stuart Nash LLM, MMgt, MForSc

MP for Napier

Minister of Police
Minister of Fisheries
Minister of Revenue
Minister for Small Business

B19-0015

[redacted]
PauaMAC 4 Industry Association

13 FEB 2019

Tēnā koe [redacted]

Approval of the Chatham Islands Pāua (PAU4) Fisheries Plan

I am writing to notify you of my approval of the Chatham Islands Pāua (PAU4) Fisheries Plan as submitted to me by the Paua Management Committee 4 (PauaMAC4) on 30 January 2019, in accordance with section 11A of the Fisheries Act 1996.

I support your efforts to develop a collaborative and effective management plan with iwi, imi, quota holders, locally engaged stakeholders and the Chatham Islands community to restore, and maintain, the sustainability of the pāua fishery. It is my view that the Plan is beneficial in providing more responsive, localised management of the resource, increased stakeholder commitment to management decisions, and a more transparent operating environment.

I would like to thank you for engaging with Fisheries New Zealand in developing your Fisheries Plan. My officials have notified me that they are preparing to work with you in preparation for the roll-out of a combination of feedback and monitoring systems to aid compliance and the overall effectiveness of the Plan.

My officials will be in touch to discuss preparations for a joint announcement of the Plan, should this be an approach of interest to PauaMAC4.

As signaled by officials at meetings with PauaMAC4 representatives in December last year, a further review of the PAU4 Total Allowable Catch is being considered for this year. I invite you to discuss this with officials and to continue to work constructively with Fisheries New Zealand to develop options for public consultation on any such review.

I also note your aspirations around the concept of 'Authorised management', and your desire for the use of statutory tools to support this. However this is not currently possible under the current legislation, but I will follow the development of a pilot concept with interest.

Thank you, once again, for your efforts to safeguard this important resource for future generations. I wish you well in delivering the objectives contained in your Fisheries Plan.

Nāku noa, nā

Hon Stuart Nash
Minister of Fisheries

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PAUAMAC 4 Industry Association Incorporated
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CHATHAM ISLANDS

Phone/Fax 03 3050 520
Email pauamac4@xtra.co.nz

2 August 2019

Fisheries New Zealand,
Ministry for Primary Industries
By email: FMSubmissions@mpi.govt.nz

PauaMAC 4 Industry Association submission on the Review of Sustainability Measures for 1 October 2019

Tēnā koutou katoa,

Introduction

1. This submission is provided on behalf of PauaMAC 4 Industry Association Incorporated (PauaMAC 4). This submission concerns Fisheries New Zealand's (FNZ) initial proposal for the review of the catch limits and allowances for pāua in the Chatham Islands (PAU 4).

2. PauaMAC 4 represents the commercial pāua industry in PAU 4. Our members include owners of PAU 4 quota and Annual Catch Entitlement (ACE), commercial harvesters, and associated industry personnel such as licensed fish receivers.

3. PauaMAC 4's Rules of Association provide that decisions on matters related to TACs, TACCs and shelving are made by class 1 members (i.e. quota owners). At the Annual General Meeting in June 2019, PAU 4 quota owners voted unanimously to approve the 2019-20 Annual Operating Plan (AOP) which is based on and includes all aspects of the PAU4 Fishery Plan. The PAU 4 Fishery plan was approved by the Minister on 13 February 2019. You can find a copy attached.

4. PauaMAC 4 considers that it is essential to view the current management decisions in light of the management approach for PAU 4 in the immediate, medium and long-term. The measures we propose in this submission establish an effective and coherent package of management measures to ensure the sustainability of the Chatham Islands' pāua stocks and provide for their utilisation now and into the future.

Summary of PauaMAC 4's position

5. **PauaMAC 4 supports Option 1, in line with the following**:

    - **We support** setting a TAC for PAU 4 for the first time;
    - **We support** FNZ's proposed allowances for recreational and customary fishing and other sources of mortality caused by fishing;
    - **We oppose** a TACC reduction; and
    - **We support** formal shelving that will ensure improvement in the sustainability of the PAU4 fishery alongside fine scale management as detailed within the PAU4 Fishery Plan. We are committed initially to shelve 40% of ACE over the next 2 years.

6. **PauaMAC 4 supports the PAU4 Fishery Plan and will**:

    - **Continue to implement** the PAU4 Fishery Plan which provides the basis for fine-scale responsive management of the PAU 4 fishery; and
    - **Support** legislative change to provide for "authorised management", under which a super-majority of quota owners in a stock can make and implement binding rules about commercial harvesting and ACE management within government-set standards.

Detailed submission – immediate measures

7. PauaMAC 4 propose a package of two management measures to be implemented by 1 October 2019:

    - **ACE shelving:** The continued commitment by quota owners of a 40% ACE shelve over the next two years.
    - **PAU 4 Fishery Plan:** The continued implementation of our fine scale management plan to address local area depletion and associated issues.

ACE Shelving

8. PAU 4 quota owners are committed to transferring 40% of PAU 4 ACE to an independent entity (FishServe) by 31 August.

9. PauaMAC 4 intends that ACE shelving will be maintained at 40% for at least two years. The level of shelving will be reviewed annually and will be adjusted if required to ensure improvement in the sustainability of the PAU4 fishery.

10. We note that all the options proposed by FNZ generate a higher catch limit than what has already been achieved, and will continue to be achieved through a voluntary shelve of 40% (195.6 tonnes)

11. As agreed by the parties to the PAU4 and PAU7 High Court proceeding (in the context of discontinuing the proceeding), ACE shelving is a mandatory relevant consideration in the event of any future TAC/TACC adjustment (pursuant to section 11(2A) of the Fisheries Act 1996)[1].

PAU 4 Fishery Plan

12. PauaMAC 4 has developed and implemented the PAU 4 Fishery Plan which identifies objectives, strategies, measures and rules that support the purposes and principles of the Fisheries Act 1996.

13. The strategies and actions in the plan support the effectiveness of shelving by directly addressing and reversing the risk of local area depletion. The primary mechanisms to address local area depletion are:

    - Fine-scale effort spreading to be implemented by:
        - Setting harvest targets for every PAU4 statistical area (which may include setting targets of zero for areas known to be subject to local depletion);
        - Monitoring actual sub-area catch on a timely basis; and
        - Implementing in-season closures of sub-areas if catch levels exceed the sub-area target by a specified percentage; and
        - Reviewing sub-area targets on an annual basis and adjusting if necessary; and
    - Further protecting and enhancing the fishery at a local scale by:
        - Improving information on spawning;
        - Adjusting minimum harvest size at an appropriate spatial scale;
        - Implementing a seasonal spawning closure; and
        - Undertaking translocation and reseeding programmes.

14. The Plan also sets out associated management strategies, such as:

    - Improving the comprehensiveness and accuracy of harvest information;
    - Developing and implementing a harvest control rule;
    - Timely adjustments to commercial harvest levels using ACE shelving;
    - Improving the performance of harvesters in relation to PauaMAC 4's general operating procedures and best practice rules and enhancing quota owner responsibility for harvester performance; and
    - Encouraging a community-based approach to the management of Chatham Islands' fisheries by participating in a Chatham Islands Fisheries Forum, together with iwi, imi and recreational fishers.

[1] CIV 2017-485-788. The parties to the PAU4 and PAU7 proceeding recently agreed that the Minister must take into account any ACE shelving arrangements provided for in a fisheries plan.

Rationale for industry submission

15. **The PAU4 Fishery plan is a valid and legally appropriate mechanism to reduce the commercial harvest of PAU 4 by at least40%.**

    The shelving and fine-scale PAU4 Fishery Plan outlined in this submission are matters that the Minister is obliged to take into account when setting a TAC and TACC for PAU 4[2]. In particular (in regards to the Fisheries Act 1996):

    - When deciding whether to exercise the Ministers discretion under section 11 to set or vary a TAC, the Minister must take into account the effects of fishing on any stock (section 11(1)(a)), which necessarily includes the effects (present and future) of shelving and industry fine-scale effort spreading on the stock; and
    - Sections 13(2), (2A) and (3) together provide an obligation on the Minister to move a stock towards/above B_{MSY}, and when deciding on the *ways* and *rates* (i.e. timeframes) to achieve that statutory objective, the Minister must consider all relevant social, cultural and economic factors. The Minister is obliged to take into account PauaMAC 4's shelving and fine-scale effort spreading when considering these section 13 provisions because:
        - Shelving constitutes a "*way*" in which, and affects the "*rate*" at which, a stock can be moved towards/above B_{MSY};
        - Shelving also affects whether (and the way and rate) a TAC at any given level enables the level of the stock to move towards/above B_{MSY}; and
        - Social, economic and cultural factors may support a shelving arrangement in place of a TAC/TACC reduction for the purposes of section 13(3).

16. **PauaMAC 4 considers that shelving and a fine-scale management plan better achieves the purpose of the Fisheries Act (i.e., providing for utilisation while ensuring sustainability) than a TACC reduction.**

    The available science provides no certainty on trends of PAU 4 stock abundance and the fishery still supports good CPUE by New Zealand standards. There is no evidence to suggest that PAU 4 has fallen below the soft limit in MPI's harvest strategy standard (20% B_0) which would trigger a rebuilding strategy. However, there is general agreement that local area depletion is a pressing management issue from a utilisation perspective but also potentially in terms of ensuring sustainability.

17. The Dragonfly report does not provide conclusive trends and in fact is missing some important variables[3]. The report assumes that effort is standardised and constant, which does not take into account the fine-scale management implemented through the PAU4 Fisheries Plan. Effort is not constant in PAU4 for two reasons.

[2] CIV 2017-485-788. The parties to the PAU4 and PAU7 proceeding recently agreed that the Minister must take into account any ACE shelving arrangements provided for in a fisheries plan.

[3] We refer to the points raised in Ngāti Mutunga o Wharekauri Iwi Trust and its Asset Holding Company response to the PAU 4 Sustainability review for 19/20.

- The increased Minimum Harvest Size (MHS) and effort spreading measures in the PAU 4 Fishery Plan both increase effort. By definition, effort spreading displaces effort from the favoured areas reducing average catch rate.
- Traditionally, PAU4 pāua was canned, During the past three years supplementary pāua markets have developed on the Chathams for live and individually Quick Frozen (IQF) whole pāua in the shell. Both of these markets have a narrower specification especially for quality, clean shell, uniform size and limited quantity. Divers supplying this product essentially fish to order, generally with smaller landings than would have been made for in the canning market.

18. A TACC cut alone is not an effective mechanism to address local area depletion. While it may be possible to implement industry fine-scale management alongside a TACC cut, PauaMAC 4 considers that it would be challenging (if not impossible) to obtain adequate quota owner support for the necessary voluntary management measures if the TACC is reduced. (see below for further discussion of this point). In comparison to a TACC reduction, the combination of shelving and fine-scale management of fishing effort will provide a more effective way of addressing serial depletion and will also reduce overall catch to the same level as FNZ's proposed TACC reductions. Provided a shelving arrangement is robust, it makes no difference from the perspective of ensuring sustainability whether a stock is moved towards its management target using a reduced TAC/TACC or a shelving arrangement.

19. **PauaMAC 4 has a successful track record of shelving (20% for four years and 10% for two years*, 40% for two years)*.**

    While historically quota owner support for shelving has not always been unanimous, it has nonetheless been adequate to achieve the desired levels of catch reduction. Catch reporting data suggest that quota owners who have not formally shelved ACE have nevertheless refrained from harvesting their full ACE entitlement. It should be noted that PauaMAC 4's proposed shelving of 40% of ACE is framed in terms of achieving a specified level of shelving and is not dependent on 100% quota owner support.

20. **Shelving provides better opportunities for timely adjustments to commercial harvest levels in the future if monitoring of the fishery indicates that a larger or smaller level of catch reduction is required**.

    This is particularly relevant in light of PauaMAC 4's intention to develop a decision rule to inform catch adjustments, as set out in the Industry Management Plan.

21. **Shelving maintains proportionality in the PAU 4 fishery more effectively than a TACC reduction.**

    It enables the TAC and recreational and customary allowances to be set at a level that is proportional to the current PAU 4 TACC (and which therefore reflects actual catch shares among fishing sectors) rather than a reduced PAU 4 TACC (which would reduce the overall fishery share allocated to commercial fishing). Furthermore, by continuing to use shelving rather than TACC adjustments, proportionality will be retained as commercial harvest levels are adjusted in future. The use of shelving insulates all sectors (and the Minister) from risks associated with unprincipled reallocation of catch shares among fishing sectors.

22. **PauaMAC4 note that preferential allocation rights (28N rights) destabilises collective action of PAU 4 fisheries management.**

    PauaMAC 4 represent quota owners who hold 28N rights, and those who do not, our challenge is to ensure the collective management of the PAU 4 fishery while balancing the rights and interests of PAU 4 quota owners.

    Currently, 28N rights are destabilizing collective action towards PAU4 fishery management and can cause a divide between quota owners. We see it incumbent for the Crown to provide a solution to the ongoing impas.

23. **Finally, PauaMAC 4 notes that shelving is a demonstration of industry responsibility and concern for the status of fish stocks.**

    This is particularly important in light of ongoing industry concern at the way the PAU4 TACC was increased to well above historic catch levels following quota allocation appeals. Although this is now "old history", it is part of the reason that the industry has implemented shelving and other associated measures in recent years. Shelving is a real illustration of how the industry would operate under an "authorised management" approach and is therefore aligned with PauaMAC 4's longer term strategy of establishing a devolved management regime for the Chatham Islands fisheries.

Detailed submission – medium term measures

Continuous development of the PAU 4 Fishery plan

24. PauaMAC 4 will continue to work with iwi, imi, other sectors of the Chatham Islands community and FNZ to expand and evolve the attached PAU 4 Fishery Plan.

25. By 1 October 2019, PauaMAC4 aim to have an agreement between FNZ and PauaMAC 4 on a set of enforceable commercial harvesting rules that will apply on an annual basis. These rules are included in the PauaMAC4 Annual Operating Plan (AOP copy attached) that is consulted on and approved at each June AGM. The AOP identifies the parameters for the fishery that would be adjusted on an annual basis (e.g., sub-area catch limits, variable MHS) and would set out an annual process whereby:

    - PauaMAC 4, in consultation with quota owners and divers, proposes settings for the identified parameters;
    - PauaMAC 4 consults with other fisheries stakeholders and the local community and seeks endorsement of the proposed industry management measures for the upcoming fishing year; and
    - FNZ and PauaMAC 4 agree on the management measures, which then become 'rules' within the fisheries plan for the next fishing year.

Rationale for industry submission

26. PauaMAC 4 continues to support the implementation and ongoing development of the PAU4 Fishery Plan because this will:

    - Provide greater certainty for the PAU 4 industry and the Chatham Islands' community about the long-term approach to provide for the utilisation and ensure the sustainability of the PAU 4 fishery;
    - At the same time, enable more flexible and responsive management measures to be developed and implemented on a year-to-year basis;
    - Align the aspirations and actions of the pāua industry, iwi, imi, other fisheries stakeholders and FNZ on the Chatham Islands and support a community-based approach to management of the PAU 4 fishery; and
    - Improve the integrated management of fisheries resources by establishing a plan that will have statutory status under other legislation including the Resource Management Act 1991.

Detailed submission – longer term measures

Legislative change

27. PauaMAC 4 recommended in our submission in 2017 that priority be given under MPI's *Future of our Fisheries* work programme to put in place legislative changes to provide for "authorised management". Authorised management is described in detail in the Initial Seafood Industry Contribution to Fisheries Management Review 2015/16 *Creating Value 'Beyond Sustainability* and was supported in PauaMAC 4's submission on the fisheries management review (both submissions made in December 2015).

28. Under an authorised management approach, a group of quota owners (authorised by the Minister) is able to purchase specified fisheries services and perform specified management functions for the commercial share of a fishery within government-set standards. The quota owners use a statutory decision-making tool to make rules by super-majority, subject to statutory checks and balances to prevent inappropriate behaviour.

29. The rules would bind all quota owners and commercial harvesters in a fishery to provide MPI and fisheries stakeholders with confidence that industry management measures will be implemented in a transparent and enforceable manner. *This concept was supported by the Minister for FNZ in his letter dated 13 February 2019. It would fair to say that PauaMAC 4 and their advisors have been very proactive in trying to achieve this goal and FNZ officials less so. It seems ironic that while all the stakeholders in the PAU4 fishery commercial, customary and recreation are in full agreement FNZ seem determined to make this as difficult as possible to enable the stakeholders to take full responsibility and ownership of their fishery. We see this as time wasting both emotionally and financially when we should be investing this effort into more positive aspects to ensure PAU4 sustainability.*

Rationale for industry submission

30. PauaMAC 4 supports the Fisheries Act 1996 legally recognising and providing for authorised management. Authorised management enables quota owners to adopt and implement more sophisticated fine-scale management measures for commercial fishing. It will enable PauaMAC 4 to build on our current voluntary management initiatives, strengthen our relationships with other fisheries stakeholders, and enhance the value of the PAU 4 fishery. Most importantly, authorised management will help overcome some of the challenges that we have experienced with the implementation of voluntary industry management measures, including:

    - The free-rider effect, whereby quota owners or harvesters who do not comply with industry rules nevertheless receive the full benefits from the implementation of those rules by others;
    - Limited sanctions for non-compliance with voluntary industry rules; and
    - The structure, accountability, and checks and balances are less robust when operating in a purely voluntary environment.

31. We consider that the PAU 4 fishery (and Chatham Islands fisheries in general) are ideal candidates to trial the authorised management approach. In comparison with most New Zealand fisheries, PAU 4 has a number of attributes which facilitate effective delegated management. Most Chatham Islands fisheries stakeholders have multiple interests, which makes it easier to obtain support for management measures. There is comparatively little recreational catch due to the low population and the relatively small number of visitors and tourists. Imi (Moriori) and Iwi (Ngāti Mutunga) have strong links to the fishery through their commercial and customary interests. Of the primary sector groups, fishing is the main income earner for the Chatham Islands. The scale of illegal fishing is not high compared to other areas in New Zealand. This means that management measures for the commercial pāua fishery can be even more effective at ensuring sustainability and delivering value because the industry is able to fine-tune management to a greater extent without the gains being confounded by other sectors or activities.

32. The geographic isolation of the Chatham Islands also helps make it a good test case for a more decentralised model of fisheries management whereby those with a direct interest in and proximity to the fishery are able to exercise a greater level of responsibility. There are examples overseas of successful decentralised fisheries governance approaches being applied in remote island communities – such as the industry self-management regime which has operated in the Shetland Islands' inshore shellfish fisheries for the last sixteen years.[4]

[4] Gibbs, N. (2016). *Successful Industry Self-Management in the Shetlands*. Seafood New Zealand, Volume 24 No. 6 (December 2016) pp26-27.

Conclusion

33. PauaMAC 4 supports Option 1, the implementation of a package of measures to safeguard sustainability and provide for the utilisation of the Chatham Islands pāua fishery.

34. Given the significance of the pāua fishery to the Chatham Islands, PauaMAC 4 would appreciate an opportunity to discuss this submission with FNZ. We look forward to further engagement to ensure that this package of measures can be delivered to provide further value to the Chatham Islands community and to New Zealand.

E noho ra,

[redacted]

[redacted] – PauaMAC4

Quinten Wayne David Tangohau
[redacted]

25.07.2019

Submission - Review of Sustainability Measures for Kina (SUR 1A, SUR 1B) for 2019/20
Fisheries New Zealand Discussion Paper No: 2019/12

1. Introduction.

I work as a kina diver, and I am a keen recreational spearfisherman. During the past few years working in both SUR1A and SUR1B I have seen many Kina barrens that we often don't dive due to quota restrictions.

I have also noticed when diving recreationally that the areas that are covered in kina barrens have less juvenile fish. This is because the kina eat all the kelp, and the juvenile fish have no where to hide. I would be very keen to see more fish species thrive in these marine habitats.

2. Questions for submitters on options for varying TACs, TACCs and allowances:

I Support Option 3 - a 50% increase to the TAC, TACC and other allowances.

The reasons why I support Option 3 are:

1. There are too many kina barrens in area 1A and 1B.

2. The kina catch has been taken at its maximum for the last 10+ years.

3. A small 20% increase – Option 2, is not enough to manage all of the kina barrens.

4. There are plenty of areas where customary and recreational people can harvest kina. In the commercially-managed areas the quality of kina significantly improves, so recreational and customary harvesters will benefit most from Option 3.

5. The original quota set for SUR 1A & 1B was low, because of lack of information on the fishery. We now have that information, including evidence of a major bounce back in the Bay of Islands kina fishery.

6. I agree with the Discussion Report that fine-scale reporting will allow for better management of the kina fishery, and that this is now possible because of the new Electronic Reporting system in place.

7. Local and international experience suggests that the level of harvest in Option 3 can be managed through fine-scale management.

The allowances for customary fishing for Option 3 are appropriate. This is because the quality of kina will improve in kina barrens which are managed by the additional fishing pressure.

The allowances for recreational fishing for Option 3 are appropriate. This is because the kina fishery and other fisheries will improve if kina barrens are better managed by stronger commercial and customary fishing.

Other sources of mortality are minimal because the commercial harvest is done by hand-gathering. The by-catch from other fishing methods (trawling, dredging) is minimal.

Summary:
I agree with the Discussion Report that under Option 3 catch limits could be easily adjusted in future if fine scale catch monitoring or other information suggests this is appropriate.

Regards

Quinten Tangohau

From: Rod Littlefield
To: FMSubmissions
Subject: Review of NZ fish stocks
Date: Saturday, 22 June 2019 10:11:28 AM

One of the main fish species for shore based recreational fishers has been Kahawai.
Yet they have been plundered by commercial trawlers to the point that they are now infrequently seen at river mouth and workups at sea in Marlborough and along our east coast.
Up to five year ago l (and Fisher friends) could regularly catch them at the Wairau river mouth, and often when surfcastlng. This year l caught one !
This is one of the few species recreational fishers are able to catch from shore, yet it has been ruined by greedy commercial fishers decimating the stock, which they sell overseas for a pittance.
They are worth far more to the NZ economy in supporting associated businesses,ie fishing tackle etc and tourism.
As the recreational take of all fish stocks is less than 2% , stop the commercial catch of Kahawai and save this fantastic sport fish for recreational fishers.
We are already penalised in Marlborough, compared to other areas, with a 2 cod and 3 snapper limit, besides the recreational only set netting ban.
Rod Littlefield. Blenheim.

From:	Rodney Davidson
To:	FMSubmissions
Subject:	Current review of fish stock submissions.
Date:	Sunday, 30 June 2019 10:51:15 AM

Dear Sirs,

I would like to think this is not so, this ' tinkering ' and acting as though you have something meaningful to say and do, but whilst this apparent tinkering is taking up your time and thought process, other far more important situations are unfolding that seem to totally by pass your administrators unnoticed?

Anyone checked recently the numbers of still registered EU compliant vessel fish rooms, (now only 772 registered listed, still going down too,) so the actual catching sector is in serious decline and fishing vessels being tied up continues! A picture is worth a thousand words as to the current pretend stewardship by present ' management ' should be obvious by now I would think, yes? Fishermen and Women are voting to leave the Industry rather than be a part of a very sick management regime ongoing. The whole of the Inshore Fishery catching sector is in increasing major decline, ask yourselves why perhaps?

The apparent focus too, seemingly on ' Maori ' boosting involvement in fisheries is also sadly misplaced and very misleading and contry to original aims to not have fish stock percentage concentrations to individual companies etc. Please explain? ' Maori ' (it is just a word in reality) without any real significance, and a whole peoples history built on fraud is being questioned more and more now as numerous new information's come to light and into play and known. www.forbiddenhistory.co.nz Buy the book and weep! In third print now I am told, and a second new book is at the publishers now for proofing and printing too! A ' History ' now in tatters, fraud and deceit!

Thank you for the opportunity to place this submission before you.

Best regards

Rodney Davidson
[redacted]
[redacted]
Celtic / Patupaiarehe lineage please note.

Fisheries New Zealand
Sustainability Review 2019
Fisheries Management
PO Box 2526
Wellington, 6011

26th July, 2019

FMsubmission@mpi.govt.nz

Submission: Review of Sustainability Measures for 1 October 2019

1. The Royal Forest & Bird Protection Society of New Zealand Ltd. (Forest & Bird) appreciates the opportunity to comment on the proposed review of sustainability measures for 1st October 2019.

2. Forest & Bird is New Zealand's largest independent conservation organization, numbering around 80,000 members and supporters. Forest & Bird and its members have been working to preserve, protect and restore New Zealand's natural environment and native species for over 95 years. Forest & Bird is the New Zealand partner of the Global BirdLife International network of NGOs with partners in 120 countries.

General comments:

3. The vision of the Minister of Fisheries and the governing agreements of the Coalition are to have abundant and sustainable fisheries, thriving communities and a healthy marine environment for the benefit of all New Zealanders. This will mean phasing out destructive, unselective and unsustainable fishing practices like bottom trawling. It will also mean putting in place strong regulatory incentives for fishers to change their behaviour and innovate.

4. Forest & Bird recently submitted on the Fisheries Change consultation and highlighted that the Quota Management System (QMS) is outdated and not working as well as intended. The QMS does not allow flexibility to include ecosystem objectives. Forest & Bird has been strongly advocating that Fisheries NZ commits to implementing an integrated approach to fisheries management which includes ecosystem based principles and moves away from managing single stocks, which is what is being proposed in this consultation.

5. New Zealand can no longer afford to lag behind other developed nations and must address the impacts of fishing on the ecosystem including benthic impacts and impacts on endangered, threatened and protected (ETP) species when making management decisions and setting quotas. The effects of climate change, ocean acidification and ocean warming also need to be considered in stock assessments and TAC/TACC allocations.

6. Improving the sustainability of New Zealand's primary production sector by increasing fish stocks, reducing all bycatch and protecting the marine environment are key priorities for Forest & Bird.

7. New Zealand is a global hotspot for marine life. Internationally we market ourselves as clean, green, sustainable, and 100% pure. New Zealand has a serious ETP species bycatch problem. Every year thousands of seabirds, hundreds of marine mammals, tonnes of protected fish and corals are killed unnecessary by commercial fishing. Forest & Bird wants a new way of thinking about ETP species bycatch based on the principle 'we only catch what we eat'. New Zealanders want our precious marine mammals, seabirds and sharks to thrive. Globally the demand for sustainable seafood is increasing and it's likely in the near future New Zealand will be held accountable internationally for how sustainable our seafood is. The fishing industry and regulators need to change the way ETP species bycatch are viewed.

8. The Government lacks a coherent whole of Government policy or vision to drive reductions in ETP species bycatch. Forest & Bird strongly recommends the Government adopts an ambitious zero bycatch goal and sets out a pathway to reduce ETP species bycatch. None of the fish stock proposals being consulted on have adequately acknowledged bycatch or the impact some commercial fishing methods are having on ETP species, such as Māui and Hector's dolphins and protected seabirds like hoihoi and antipodean albatross. New Zealand has a serious bycatch problem and this is a missed opportunity to drive innovation and start to address one of the biggest anthropogenic threats in the marine environment. New Zealand won't have healthy marine environments with abundant and sustainable fisheries while the Government's and Fisheries NZ's current position is that it is acceptable to kill ETP species as long as they are reported.

9. Zero bycatch goal is an aspirational target. Just like a workplace may commit to a zero harm or accident policy, which inevitably isn't always possible but drives a workplace to do everything to achieve this. New Zealand commercial fisheries need to commit to continued improvement, innovation and mitigation and a zero bycatch policy would drive this. It could mean fishers would be required to avoid fishing in

specific areas during specific times of the year if there was a higher change of killing ETP species, or it could result in fishers having to use more proven mitigation at sea to avoid catching ETP species. A zero bycatch policy would incentivise fishers to innovate and develop new fishing methods or mitigation and or use alternative fishing methods altogether. Ultimately a zero bycatch policy would improve how we catch seafood and would enhance New Zealand's reputation internationally as leaders of sustainable seafood which could have significant flow on economic benefits through market access and premier products.

10. Forest & Bird will be submitting on the Hector's and Māui dolphin Threat Management Plan (TMP)[1]. Fisheries NZ need to include New Zealanders submissions on the TMP into the advice paper to the Minister especially regarding fisheries that overlap with foraging areas to ensure that fisheries decisions are not being made in a silo.

11. Offshore movements of Hector's dolphin, from aerial surveys, appear largely constrained by the 100m depth contour which extends in some areas out more than 20 Nautical miles from shore. Movements inside or outside this contour line will be associated with oceanographic features and current systems that confer advantages through localised productivity that may cause Hector's dolphins to aggregate e.g. areas of upwelling. So while the 100m depth contour is not a fixed boundary it provides a useful guide for distribution under a precautionary approach.

12. The Forest & Bird approach to fisheries management is that the TMP follows our zero bycatch policy in which we call for the removal of all fishing types that can catch dolphins from their habitat. Given uncertainties around the dolphin distributions and habitat use and evidence that they use waters at least out to the 100m depth contour, we consider that the precautionary approach supports using area out to the 100m depth contour as a proxy for their habitat.

13. Forest & Bird would support a package of transitional assistance for those local commercial fishers who will not be able to relocate their fishing effort, are unable to change methods, or who lack quota and so might find their operation is unviable.

14. Forest & Bird will not support any increase in inshore trawl or set net fishing effort in areas where Hector's or Maui dolphins are known to forage until the new TMP is implemented and 100% observer coverage is required.

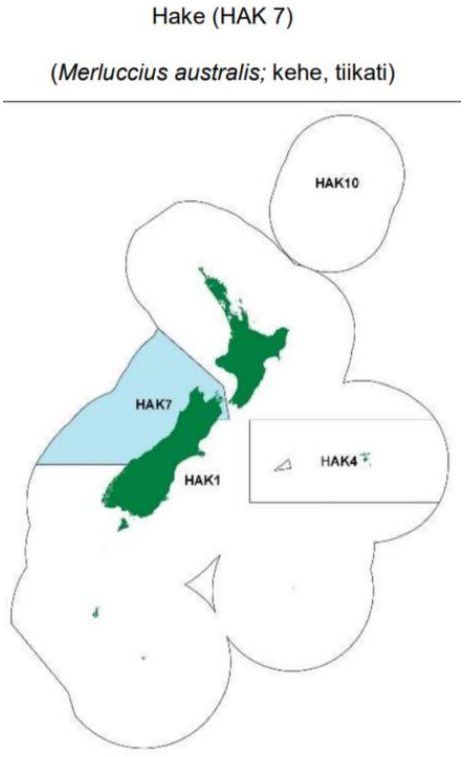
[1] https://www.mpi.govt.nz/dmsdocument/34971-2019-hectors-maui-dolphin-consultation

15. Forest & Bird supports the roll out of digital monitoring of commercial catch through electronic log books and GPS, this is a great first step and will provide Fisheries NZ with valuable fine scale catch information. The second step, where we are now, is that New Zealand fisheries need 100% observer coverage. Fisheries NZ must recommend the Minister makes a strong commitment to implement this. Initially this can be achieved by phasing in 100% observer coverage through a combination of electronic digital monitoring (cameras) and at sea observers, prioritising inshore fisheries that have had little or no observer coverage, and those fisheries known to kill ETP species.

16. Fisheries New Zealand is consulting on proposed changes to the sustainability measures and other management controls for the following selected fish stocks; hake (HAK7), hoki (HOK1), kina (SUR 1A & 1B), ling (LIN7), orange roughy (ORH 3B & 7A), paua (PAU4), red snapper (RSN 1 & 2), tarakihi (TAR 1,2,3 & 7) and top of the South Island trawl fishery (JDO7, GUR7, ELE7 & SPO7). Refer to the section below for Forest & Bird specific comments.

Specific stock comments:

Hake (HAK 7 – WCSI):



17. Hake is a deepwater fish, usually caught in the hoki bottom trawl fishery but does have a target fishery on the west coast South Island. Hake tends to be taken slightly deeper than hoki between the 500 – 650m depths. Hake has been certified sustainable by the Marine Stewardship Council (MSC) since 2004.

18. The HAK 7 (west coast South Island) stock was assessed in 2019 and the scientific assessment shows HAK in area 7 have been seriously overfished as the biomass is now down to 17% BO (original unfished biomass). Given the serious stock decline from overfishing HAK 7 should no longer be certified 'sustainable' by the MSC, such a significant stock collapse should trigger a MSC review.

19. The Harvest Strategy Standard (HSS) policy guidelines are clear, when a stock reaches this critically low point and drops below the soft limit reference point of 20% unfished biomass "*a formal, time-constrained, rebuilding plan be implemented, aimed to rebuild the stock to at least the target level within an appropriate timeframe"* and that for this low-productivity species the *"target biomass of 40% of the unfished biomass is appropriate*" (Harvest Strategy Standard, 2008[2]).

20. This latest stock assessment highlights the need for immediate reduction in the total allowable catch (TAC) and a time bound rebuild plan. Forest & Bird strongly recommends the Minister takes immediate action to start the rebuild of this important deepwater fish using the best available scientific information alongside the precautionary principle. Therefore, Forest & Bird welcomes the proposals to reduce the TAC put forward by Fisheries NZ.

21. Fisheries NZ has proposed three options to reduce the TAC and the total allowable commercial catch (TACC) from 1st October 2019, refer to Table 1.

Table 1: Fisheries NZ TAC proposals for HAK 7

Option	TAC (t)	TACC (t)	Other sources of fishing-related mortality (t)	Rebuild time (below average recruitment assumption)	Rebuild time (average recruitment assumption)
Current Setting	5,120	5,064	51	N/a^	N/a
Option 1	3,200↓ (38%)	3,163 ↓ (38%)	32 ↓ (37%)	N/a	10 years
Option 2	2,300 ↓ (55%)	2,272 ↓ (55%)	23 ↓ (55%)	N/a	7 years
Option 3	1,400 ↓ (73%)	1,382 ↓ (73%)	14 ↓ (73%)	16 years	5-7 years

^ In this context, N/a means that the rebuild will not be achieved, or not achieved within a timeframe consistent with the HSS

22. Fisheries NZ explain in the consultation document that *"When a stock is below the soft limit (20% B0), the HSS requires development of a formal, time constrained rebuilding plan. The stock should be rebuilt to at least the target level of biomass within a timeframe of between Tmin, and 2*Tmin with an acceptable level of probability. Tmin is defined as the number of years required to rebuild a stock to the target, in the absence of fishing. For the HAK 7 stock, Tmin has been estimated using the base case stock assessment model under two recruitment assumptions. The first used recruitment from 2006-2015, which is below average, and the second used a longer 1973-2015 series"*.

[2] https://fs.fish.govt.nz/Doc/16543/harveststrategyfinal.pdf.ashx

23. While is appropriate to look at a rebuild time periods using multiple recruitment cases (average and below average), given how seriously overfished the stock is and that there are valid uncertainties in the reliability of the average recruitment probabilities we do not support the use of the average recruitment data. A better approach is to apply the precautionary principle and use the lower recruitment probability when putting forward the formal time constrained rebuilding plan options.

24. Fisheries NZ acknowledge this valid concern in the consultation document *"The 'average' recruitment assumption is that future recruitment to the fishery will be higher than that of recent years. If this assumption is wrong, the option would carry the highest risk of the fishery not rebuilding to the target within the calculated rebuild time"* as required by the HSS.

25. There is no evidence to support that future recruitment will be higher than that of recent years. Forest &Bird supports the use of the below average recruitment assumptions and rebuild time period described in the Table 2. Forest & Bird opposed the use of the average recruitment rate.

Table 2: Fisheries NZ estimated rebuild time period options for HAK7

	Rebuild time period	
Recruitment assumption	T_{min}	$2*T_{min}$
Below average recruitment	8 years	16 years
Average recruitment	5 years	10 years

26. Forest & Bird is disappointed Fisheries NZ has relied on a 50% probability that the options described in the table above would rebuild the HAK 7 stock within the required rebuild time period as set out by the HSS. In order to have an adequate level of confidence Forest & Bird recommends 70% probability not 50% as proposed by Fisheries NZ. If a 70% probability was used and the below average precautionary recruitment rebuild time period was used both Options 1 and Options 2 would not be viable and meet the HSS. Fisheries NZ would be required to put forward alternative options with higher TAC reductions (higher than what is proposed in Option 3 – 73%).

27. Forest & Bird does not support Options 1 and Options 2.

28. Given the likely on-going environmental uncertainties and climatic impacts hake and other deepwater fish stocks could experience a precautionary approach is required. At a minimum Forest & Bird supports Option 3, a 73% reduction in TAC. The next

stock assessment for HAK 7 is scheduled for the 2021/22 financial year, and the next West Coast South Island trawl survey is scheduled for winter 2021. When this information becomes available Forest & Bird would welcome and support a review of the TAC and recruitment rates used (based on updated age composition data) to determine if the 1,400t TAC would allow HAK 7 to rebuild from 17% BO to the 40% BO target within the required rebuild time period or if further TAC could be made available without impacting the rebuild.

29. Forest & Bird acknowledge that any reduction in TAC will incur short-term economic losses by the fishing industry, but as stated in the consultation document this will primarily only impact the four foreign-owned bottom trawl vessels that undertake almost all the hake target fishing in HAK 7 area.

30. A significant proportion of hake is caught as bycatch in the West Coast South Island hoki fishery. Given that hoki stocks have also been heavily overfished and should have a TAC reduction for the 1st October 2019 fishing year the impact of reducing the HAK 7 TAC will be less of a concern as both fisheries TAC should be reduced and therefore the HAK 7 TAC decrease should not impact on hoki ACE.

31. Forest & Bird strongly support that the "*short-term economic loss should be considered in the context of the* ***value of a fully rebuilt fishery*** *and the* ***potential benefits from a more rapid rebuild***", which is why we recommend the only option Fisheries NZ should put forward to the Fisheries Minister is Option 3, or additional more precautionary (larger TAC reduction) options.

32. In summary Forest & Bird support at a minimum Option 3, a TAC reduction of 73% to 1,400 t.

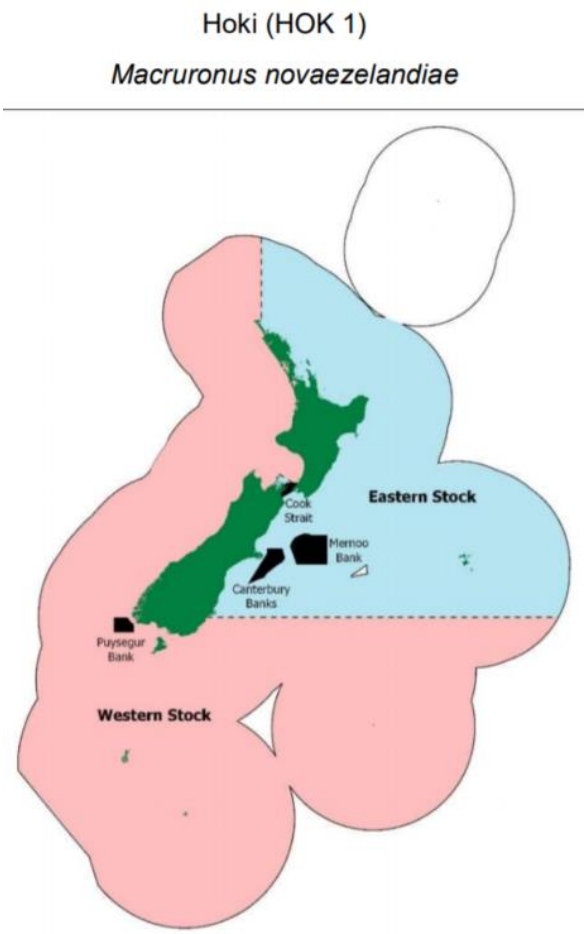
33. A positive benefit of the TAC reduction would be that the trawl footprint of this fishery would likely decrease and there should be fewer seabirds and marine mammals killed.

34. HAK 7 should not be certified by the MSC as the fishery has failed principle 1 & 3[3].

[3] **PRINCIPLE 1**
"A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery."
PRINCIPLE 3
"The fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable." Source: https://www.msc.org/

Hoki (All NZ):

35. Hoki is one of New Zealand's most important and valuable deepwater fish. Hoki are considered by Fisheries NZ as a "*reasonably fast-growing species widely distributed throughout New Zealand waters, most commonly in depths between 200 metres and 600 metres*".



36. Hoki have been controversially certified as sustainable by the Marine Stewardship Council (MSC) since 2001 despite Ministry reports revealing alleged illegal fishing dumping by hoki fishers and misreporting of catch. The west coast South Island hoki stock has undergone a significant collapse since 2001 but had been well on track with a rebuild. Based on recent catch trends and environmental change there are sustainability concerns for the west coast stock.

37. Hoki is roughly half caught by bottom trawlers and half by midwater trawls which usually occur between water depths of 400-500m.

38. Every year hoki stocks are assessed and are managed as eastern and western sub-stocks. The 2019 stock assessment for hoki estimates the biomass of the western stock to be at 56% B0 or as low as 29% B0 (depending on the assumptions used to inform inputs to the stock assessment model).

39. The hoki model projections assume recruitment based on data from 2008-2017 which has been slightly above average according to Fisheries NZ. Forest & Bird have concerns over the recruitment assumptions, age composition data (and biomass indices), hoki migration patterns and climatic environmental impacts and would recommend the more precautionary and likely accurate model is the 29% B0 estimate. This 2019 estimate is below the lower end of the management target range of 35-50% B0 and indicates a potential sustainability risk for the western stock.

40. The eastern stock was estimated to be at either 66% B0 or 64% B0 and therefore, no sustainability risk has been identified for the eastern stock.

41. The stock assessment aligns with what skippers are reporting. Skippers fishing in the West Coast hoki ground have repeatedly reported they are struggling to catch hoki, and say the fish are no longer there in large numbers. The graph below (Figure 1) highlights this on-going trend of the HOK 1 quota not being fully caught.

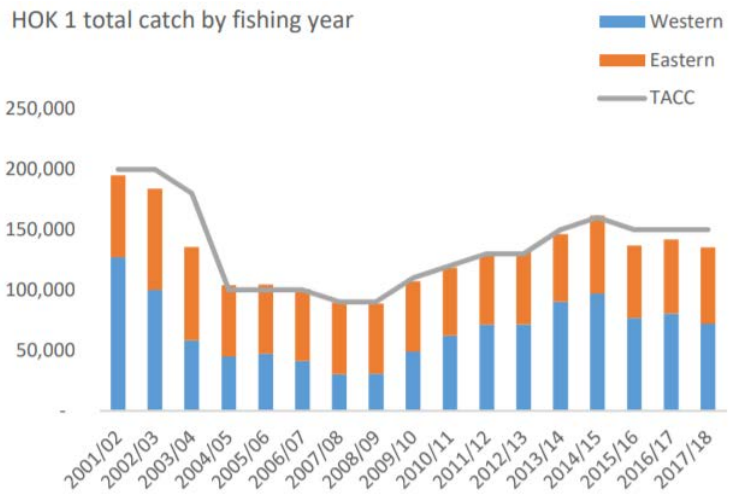


Figure 1: Fisheries NZ HOK 1 total catch by fishing year for the eastern and western stocks

42. Fisheries NZ states that the industry has responded to concerns regarding recent declining catch rates by shelving 20,000 tonnes (plus any carry forward western stock ACE) for the 2018/19 fishing year. As of 31 May 2019, this has resulted in over 30,000 tonnes of ACE being transferred to a holding account that will not be fished in the 2018/19 fishing year.

43. Forest & Bird does not support industry quota shelving and ACE carry forward. There are clearly sustainability concerns and Fisheries NZ have a requirement to put forward TAC reductions. Forest & Bird welcomes Fisheries NZ proposed options, but neither option goes far enough.

44. The Harvest Strategy Standard (HSS) policy guidelines are clear, when a stock reaches a critically low point and drops below the soft limit reference point of 20% unfished biomass "*a formal, time-constrained, rebuilding plan be implemented, aimed to rebuild the stock to at least the target level within an appropriate timeframe*" (Harvest Strategy Standard, 2008). Given the west coast hoki stock isn't below the 20% soft limit (29% Bo) we are pleased to see Fisheries NZ has taken action. Forest & Bird recommends the appropriate target biomass should be a minimum of 40% BO (not 35% BO).

45. Fisheries NZ has proposed three options to reduce the TAC and the total allowable commercial catch (TACC) from 1st October 2019, refer to Table 3.

Table 3: Fisheries NZ TAC proposal for HOK 1

		Non-regulatory catch split arrangement			Allowances (tonnes)		
Option	**TAC**	**TACC**	**Eastern stock limit**	**Western stock limit**	**Customary Māori**	**Recrea-tional**	**Other sources of fishing related mortality**
Current status	151,540	150,000	60,000	90,000	20	20	1,500
Option 1	131,340↓ (13%)	130,000↓	60,000	70,000↓ (22%)	20	20	1,300↓
Option 2	121,340↓ (20%)	120,000↓	60,000	60,000↓ (33%)	20	20	1,200↓

No change is proposed to the customary Māori or recreational allowances under either option. Both options would retain the allowance for other sources of fishing-related mortality at 1% of the TACC.

46. The first proposal is status quo a TAC of 151,540t split between the eastern and western stocks. Forest & Bird does not support keeping the status quo.

47. Option 1 would reduce the western stock TAC by 22% to 70,000t and parallels the current non-regulatory shelving arrangement by the industry. Option 1 has virtually no economic impact on the fishing industry. Given the latest catch data and most likely and precautionary biomass estimate of 29% BO it will also not recover the hoki stock as required by the HSS. Table 4 shows that there is a 67% probability the wester hoki stock would be below the 35% BO level in 2024 and that there is a chance that the western hoki stock will continue to decline and will be below the soft limit (20% BO) in 2024.

48. Option 1 is unlikely to result in a reduction in fishing effort as the TACC is similar to the current catch. Therefore, the level of bycatch of endangered, protected and threatened species by the hoki trawl fishery, which is at an unacceptable level, will not improve.

49. Option 2 would decrease the TACC by 20% to 120,000 tonnes, implemented through a 30,000 tonne (33%) reduction in the western stock catch limit. This option doesn't provide certainty that recovery to the minimum 35% BO level will be achieved. Table 4 shows that there is a 50% probability that by 2024 the western stock will be below the 35% BO level. There is also a small probability that under Option 2 the western stock will further decline and be below the soft limit (20%BO) by 2024.

Table 4: Fisheries NZ projected HOK 1 stock status under proposed options

	2019 Estimated Stock Status (% B_0)	2024 Estimated Stock status (% B_0)	Probability of being below 35% B_0 in 2024	Probability of being below the Soft Limit in 2024
Current TACC (and catch split)				
Combined Model – Eastern stock	67	74	1%	0%
Eastern stock-focused model	64	67	2%	0%
Combined Model – Western stock	56	58	7%	0%
Western stock-focused model	29	24	82%	32%
Option 1 (based on 2017/18 catch levels)				
Combined Model – Western stock	56	62	3%	0%
Western stock-focused model	29	30	67%	13%
Option 2				
Combined Model – Western stock	56	65	2%	0%
Western stock-focused model	29	35	50%	4%

50. Fisheries NZ promotes that hoki is one of NZ's most well managed fisheries through the MSC certification. In order to maintain some international credibility Fisheries NZ should put forward a third Option which provides 70% certainty that hoki western stocks will be at 35% BO within the harvest strategy standard timeframe[4] and that at a minimum by 2025 the hoki western stocks don't continue to decline below this target. We recommend a precautionary 40,000 tonne reduction to the western stock catch limit option be put forward with the corresponding probabilities. Future stock assessments are essential and supported by Forest & Bird to ensure recovery remains on track.

51. The latest (2018) Aquatic Environment and Biodiversity Annual Review (AEBAR[5]) describe that hoki and other deepwater trawl fisheries (as they are grouped together) have significant bycatch of endangered protected and threatened species. The latest data from AEBAR which is for the 2016/2017 fishing year estimate between 968 to 1,396 seabirds and a mean of 927 fur seals are killed by deepwater trawlers which include hoki.

52. The latest bycatch data for the 2017 / 2018 fishing year for the hoki, hake, ling and warehou (grouped middle depth trawl fisheries) from the 2019 Conservation Services Report[6] (CSP) found; that seabird captures had increased by 85% in comparison to the previous observer year (2016/2017). This is interesting given

[4] Between Tmin and 2*Tmin . Tmin is defined as the number of years required to rebuild a stock to the target, in the absence of fishing

[5] https://www.fisheries.govt.nz/dmsdocument/34854-aquatic-environment-and-biodiversity-annual-review-aebar-2018-a-summary-of-environmental-interactions-between-the-seafood-sector-and-the-aquatic-environment

[6] https://www.doc.govt.nz/our-work/conservation-services-programme/csp-reports/

there was slightly less fishing effort. Marine mammal captures were slightly decreased and 67.2 kgs of protected coral bycatch was observed.

53. The 2019 seabird risk assessment estimates that the hoki fishery poses a risk for three key seabirds species; Salvin's albatross (16% of risk), Southern Buller's albatross (31% of risk), and Westland petrel (11% of risk).

54. It's important not to consider hoki (or in this case middle depth trawl fisheries as they are often grouped) bycatch numbers in isolation as other fisheries such as the surface longline, deepwater bottom trawl and inshore fisheries also kill a significant number of the ETP species meaning the cumulative impact is much greater. Fisheries NZ lacks ETP species bycatch reduction targets which is why Forest & Bird is pushing for an ambitious zero bycatch goal which would help drive innovation, mitigation and meaningful and measureable ETP species bycatch reduction.

55. Fisheries NZ have inadequately discussed the impact the hoki fishery is having on protected marine mammals like fur seals and seabirds in the consultation document by only reporting observed interactions (with low level observer coverage) rather than ETP species captures estimates.

56. Option 2 (or an alternative Option 3) will result in a reduction in western hoki trawl effort so it is unlikely to increase ETP species bycatch or benthic impacts.

57. Given the importance of hoki Forest & Bird is recommending a precautionary management response. We propose Fisheries NZ develop Option 3, and present it in the final advise paper to the Minister of Fisheries as the best option to rebuild hoki western stocks with certainty (70%) by taking a precautionary approach and reducing the TAC by 40,000t. We do however note that Option 2 would likely get the western hoki stock most of the way towards recovery, and would support this.

58. Forest & Bird does not support Option 1; status quo with the shelved quota which is unacceptable.

Kina (SUR 1A and 1B – NENI):

59. Kina are an important customary food for Maori and are also important to recreational and commercial fishers.

60. Based on the last 16 years, kina catch from the north eastern North Island has been relatively stable. Refer to Figure 2

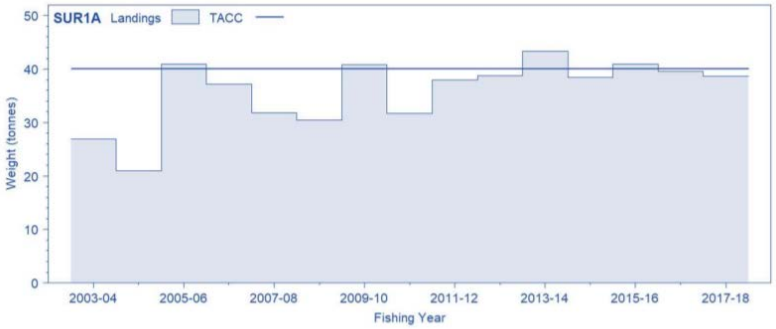


Figure 2: Landings for SUR 1A

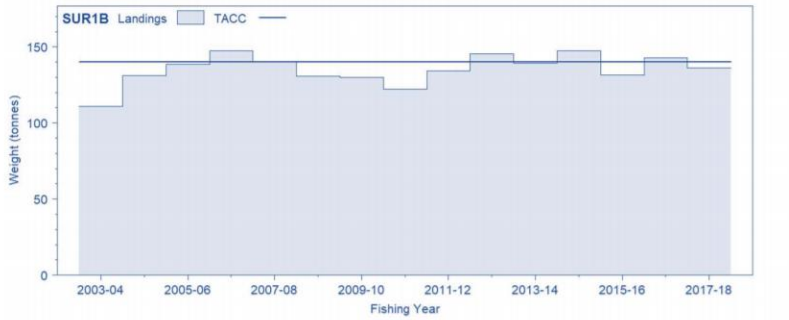
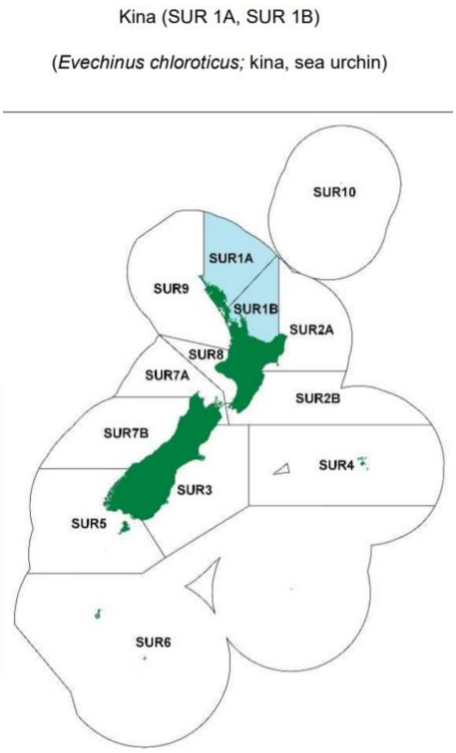


Figure 3: Landings for SUR 1B

Figure 2: Fisheries NZ landings for kina (SUR 1A and 1B)



61. Fisheries NZ is proposing three options, see Table 5.

Table 5: Fisheries TAC proposal for kina SUR 1A & 1B

Stock	Option	Total Allowable Catch (tonnes)	Total Allowable Commercial Catch (tonnes)	Allowances		
				Customary Māori (tonnes)	Recreational (tonnes)	All other mortality to the stock caused by fishing (tonnes)
SUR 1A	Option 1 *(Status quo)*	172	40	65	65	2
SUR 1A	Option 2	206 ↑ (20%)	48 ↑ (20%)	78 ↑ (20%)	78 ↑ (20%)	2 ↑
SUR 1A	Option 3	259↑ (50%)	60 ↑ (50%)	98 ↑ (50%)	98 ↑ (50%)	3 ↑
SUR 1B	Option 1 *(Status quo)*	324	140	90	90	4
SUR 1B	Option 2	389 ↑ (20%)	168 ↑ (20%)	108 ↑ (20%)	108↑ (20%)	5 ↑
SUR 1B	Option 3	486 ↑ (50%)	210 ↑ (50%)	135↑ (50%)	135↑ (50%)	6 ↑

62. Given commercial catch appears to be slightly constrained by the TAC Forest & Bird supports Option 2, which would increase the TAC by 20% in both fisheries management areas. We support Fisheries NZ that the increase "under Option 2 is unlikely to carry a significant sustainability risk" and we support the need for fine scale digital monitoring.

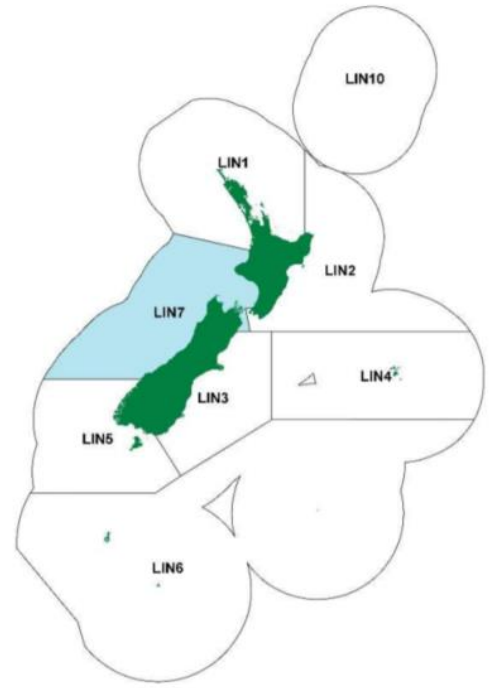
63. The TAC increases proposed in Option 3 (primarily the TACC increases) may be more appropriate once more information has been gathered through the roll out of the digital monitoring programme. Likewise further quota for customary and recreational take may be required as more information around customary and recreational catch becomes available.

64. Forest & Bird has no environmental concerns with the commercial harvesting of kina as hand gathering is highly selective. Forest & Bird agrees that removing kina in some areas will have potential positive flow on ecosystem effects by allowing the reestablishment of kelps and associated species.

Ling (LIN7 – WCSI and portion of Cook Strait)

Ling (LIN 7)

(*Genypterus blacodes;* Hoka, Rari, Hokarari)



65. Ling is a deepwater fish described as "moderately productive" usually fished between 200 - 800 meters.

66. The most recent stock assessment was carried out in 2017 for the WCSI stock (LIN 7WC) and while there was no accepted base case all three model runs indicated the stock status was around 79% BO, 66%BO or 54% BO. All three model runs support that the stock was very likely to be at or above the management target of 40%BO. Forest & Bird agree that there are unlikely any sustainability concerns around stock status of LIN 7.

67. Fisheries NZ is proposing two options (Table 5), both increasing the LIN 7 TAC by either 10% or 20%. Fisheries NZ is not proposing that current status quo setting.

Table 5: Fisheries TAC proposal for kina SUR 1A & 1B

Table 3: Proposed TACs, TACC and Allowances in tonnes for LIN 7 from 1 October 2019, with the percentage change relative to the current settings in brackets.

Option			Allowances		
	TAC (t)	TACC (t)	Customary Māori (t)	Recreational (t)	Other sources of fishing related mortality (t)
Current Setting	3,144	3,080	1	1	62
Option 1	3,458 ↑ (10%)	3,388 ↑ (10%)	1	1	68 ↑ (10%)
Option 2	3,772 ↑ (20%)	3,696 ↑ (20%)	1	1	74 ↑ (20%)

68. Option 1 is to increase the LIN 7 TACC by 10% to 3,388 tonnes and would reflect the existing average catch in the fishery (3,362 tonnes) over the last 5 fishing years (2013/14 to 2017/18) which is 9% above the current TACC. No evidence has been presented to support increasing the TACC for LIN 7 by 20% (Option 2).

69. Ling is primarily taken by bottom trawl. Fisheries NZ describe mitigation and management measures to address the effects of deepwater bottom trawl as "*closing areas to bottom trawl*" and the "*implementation of Benthic Protected Areas*" (BPAs) which "*closed approximately 30% of the NZ EEZ*". NIWA scientists found there is little evidence of benthic community resilience to bottom trawling, even after 15 years and that the nature of recovery after disturbance is uncertain (Clark *et al,.* 2019[7]). The Conservation Minister Eugenie Sage recently confirmed[8] BPAs do not count as marine protected areas (MPAs) as they were not scientifically derived or developed through a stakeholder process but instead were selected by the fishing industry as a done deal. Fisheries NZ hasn't provided the public with this information and instead continues to promote BPAs as the management answer to deepwater bottom trawling. Fisheries NZ have also failed to explain that New Zealand still hasn't defined "*habitats of particular significance for fisheries management [that] should be protected*" a principle under the Fisheries Act 1996. Forest & Bird doesn't support bottom trawling on seamounts or other vulnerable marine ecosystems and wouldn't support any increase in the existing trawl footprint or any trawling on seamounts until the above habitats of importance are identified and protected. It is likely both Options proposed for LIN7 will increase the benthic trawl footprint.

70. More than half the total catch of ling is taken in the west coast hake and hoki fisheries. Concurrently to this TAC proposal there are proposals to decrease the TAC for both hake and hoki due to serious concerns about the sustainably of stocks (hake

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

[8] https://www.stuff.co.nz/national/politics/111766497/conservationists-win-battle-over-governments-fishing-whoppers

estimated to be overfished at 17%BO and hoki to be 29% BO). Forest & Bird is proposing for both hake and hoki that western fisheries TAC are reduced to reflect latest stock assessments so the stocks can rebuild. Given this, it is not clear how the proposed increased ling quota will be caught and we have concerns that if there is an increase in targeted ling bottom trawling that these tows will also caught hoki and hake as bycatch. It is disappointing that Fisheries NZ has not discussed the implications of increasing LIN7 TAC in the context of other fish stocks. This highlights why integrated ecosystem based management and a multi species fisheries complexes approach is needed. How will the extra ling quota be taken? What impact will this have on hoki and hake? These are the sorts of questions Fisheries NZ need to answer before Forest & Bird will support the proposed 10% increase in TAC.

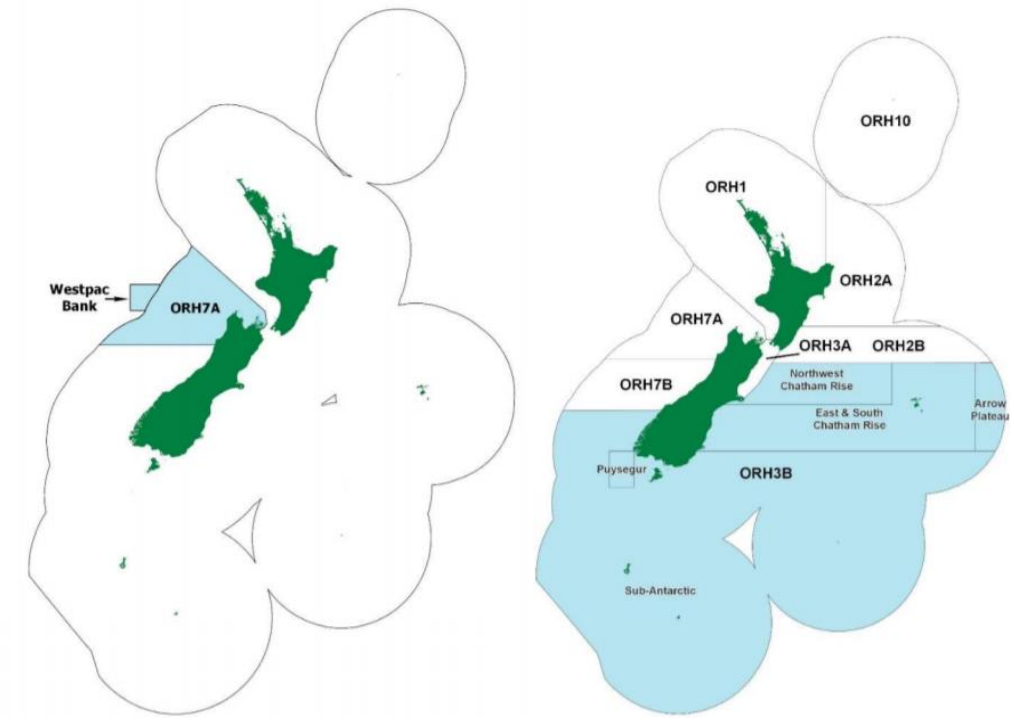
71. Ling fisheries – primary catch or bycatch trawl kill endangered threatened and protected (ETP) species. As it is unclear which trawl vessels the large deepwater (over 28 m) or the smaller inshore (under 28 m) will catch the extra quota we are unable to assess the likely impact on ETP species and there is insufficient information provided in the consultation document. There are no annual seabird or marine mammal estimated captures and no mention of any benthic species bycatch.

72. Forest & Bird will not support any increase in targeted ling inshore trawl effort in areas where Hector's or Maui dolphins are known to forage until the new Threat Management Plan (TMP) is implemented and 100% observer coverage is required. The west coast South Island estimate of mean annual fisheries deaths is 5.5 Hector's dolphins. There is an estimated low fisheries risk because of low fishing effort. However, if fishing trawl effort is going to be increased there will be more risk. West coast South Island aerial surveys show that while dolphins were seen beyond the 100m depth contour the population is largely constrained within the 100m depth contour boundary and so Forest & Bird recommend removing set net and trawl fisheries from this area on the west coast.

73. While Forest & Bird supports that LIN 7 stock is likely above the management target, there are some uncertainties around the biomass of ling and Fisheries NZ acknowledge these such as; "*that the biomass is estimated to have been stable or slowly decreasing, and that biomass indices are relatively flat which makes it difficult for the model to estimate absolute biomass"*. Given this, and the concerns raised above about the impact on hake and hoki we do not support Option 2. We tentatively support Option 1 to increase the TAC by 10% to reflect latest catch trends, but need more information about benthic and ETP species impacts and mitigation. Our support for Option 1 is strongly linked with the implementation of the TMP.

Orange roughy (ORH 3B ECSI and ORH 7A WCSI):

(*Hoplostethus atlanticus*; nihorota)



74. Forest & Bird calls on the New Zealand Government to protect all seamounts in New Zealand's Exclusive Economic Zone (EEZ), and to stop issuing high seas permits to bottom trawl vessels, which almost exclusively target seamounts and similar deep-sea features when they fish in international waters of the South Pacific and Tasman Sea regulated by the South Pacific Regional Fisheries Management Organisation (SPRFMO).

75. Orange roughy are long lived, some 120 – 130 years and don't begin spawning till around 30 – 40 plus years of age. These biological characteristics make them highly susceptible to overfishing. Orange roughy are generally found in depths between 700 -1500 meters and strongly associated with seamounts.

76. Forest & Bird has combined comments on both the ORH fisheries 3B and 7A plus Westpac Bank being consulted on and supports the Deep Sea Conservation Coalition (DSCC) submission.

77. Fisheries NZ has failed to identify the environmental impacts of these two ORH fisheries by failing to disclose the benthic bycatch levels and inadequate move on rules, and obligations under the Fisheries Act. Instead Fisheries NZ have justified managing benthic impacts through the establishment of Benthic Protected Areas (BPAs).

78. Along with the DSCC Forest & Bird strongly rejects the argument that, having protected some seamounts (through seamount closures and BPAs), it is acceptable to continue to destroy other seamount ecosystems with bottom trawl fishing. "*In the New Zealand EEZ, the impacts of fishing on the benthic environment are primarily managed through the closure of over 30% of the EEZ to bottom trawling through Seamount Closures (implemented in 2001), and Benthic Protected Areas (implemented in 2007).*" (MPI ORH 7A proposal)

79. Further such arguments are made in both the ORH 3B and ORH 7A proposals: Benthic Impacts (ORH 3B): *"Bottom trawling interacts with the seabed and benthic environment. Management measures have focused on avoiding these effects through closing areas to bottom trawling, starting with 17 seamount closures in 2001. Five of the seamount closures are within the ESCR and NWCR ORH 3B sub-areas – Pinnie, the Morgue and Pyre/Gothic group, Diamond Head and Seamount 328. In addition, the implementation of Benthic Protection Areas in 2007 effectively closed approximately 30% of the New Zealand EEZ to bottom trawling. Three of the Benthic Protection Areas are within the ESCR and NWCR ORH 3B subareas – Mid Chatham Rise, East Chatham Rise and Blink. The New Zealand trawl footprint, measured from 1989/90 to 2015/16, is estimated to cover roughly 8% (335,812 km2) of the EEZ. The orange roughy footprint in ORH 3B is estimated to have contacted 11% (4,942 km2) of the seabed in the ESCR sub-QMA, and 8% (1,867 km2) of the seabed in the NWCR sub-QMA, between 800-1600m depths from 2008-2017. Most fishing occurs within areas that have been fished for a number of years, and it is estimated that there is very little 'new' area trawled each year."*

80. Benthic Impacts (ORH 7A): *"The New Zealand deepwater trawl footprint, measured from 1989/90 to 2015/16, is estimated to cover roughly 8% (335,812 km2) of the EEZ. The orange roughy footprint in ORH 7A is estimated to have contacted 3% (2,551 km2) of the seabed in the ORH 7A QMA, and 0.5% (65 km2) of the Westpac Bank Area between 800-1600m depths from 2008-2017 (Figure 4). Note that the fishery was closed from 2000 to 2010, so this is likely an underestimate of total historical contact in these areas. Most fishing occurs within areas that have been fished for a number of years, and it is estimated that there is very little 'new' area trawled each year."*

81. These arguments suggest that the biodiversity loss that bottom trawling entails – destruction of deepwater corals, sponges and other deep-sea life can somehow be justified by the existence of the BPAs, even without prior impact assessments to establish what is down there. This is entirely without scientific basis.

82. Conservation Minister Eugenie Sage has already confirmed[9] that the BPAs do not count as marine protected areas. Forest & Bird and the DSCC strongly support this. The BPAs were not scientifically derived or developed through proper process, but were instead selected by the fishing industry and presented as a done deal. Leathwick showed that the BPAs were especially poor at protecting biodiversity, particularly endemic species (Leathwick *et al* 2008[10]). The use of BPAs to justify destroying marine life elsewhere is completely unacceptable.

83. NIWA scientists have just this year found little evidence of benthic community resilience to bottom trawling after 15 years, and that the nature of recovery in biotic communities after disturbance is uncertain (Clark *et al.* 2019). This confirmed an earlier paper (Williams *et al.* 2010[11]) which showed no change in the species assemblage consistent with recovery over a 5 to 10 year timeframe on seamounts where trawling had ceased.

84. New Zealand still hasn't defined the "*habitat of particular significance for fisheries management [that] should be protected*" a principle under the Fisheries Act 1996. Ironically, this is happening when negotiations in New York are underway for a new international agreement for the conservation and sustainable use of marine biological diversity in areas beyond national jurisdiction, underlining international concern and alarm at the many threats to marine biological diversity.

85. It is entirely unacceptable for New Zealand to be destroying marine biological diversity in its EEZ and on the high seas through bottom trawling on seamounts, at the same time as recognising the need to protect it internationally.

86. Fisheries NZ is proposing to increase the TAC for ORH 3B (as part of a three year increase) and ORH 7A and Westpac Bank, see Table 6 and 7.

[9] https://www.stuff.co.nz/national/politics/111766497/conservationists-win-battle-over-governments-fishing-whoppers

[10] Leathwick, J.R., Moilanen, A., Francis, M., Elith, J., Taylor, P., Julian, K., Hastie, T., Duffy, C. (2008). Novel methods for the design and evaluation of marine protected areas in offshore waters. Conservation Letters 1: 91–102. https://onlinelibrary.wiley.com/doi/full/10.1111/j.1755-263X.2008.00012.x

[11] Williams, A. *et al*. (2010) Seamount megabenthic assemblages fail to recover from trawling impacts. Mar. Ecol. 31, 183–199. https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1439-0485.2010.00385.x

Table 6: Fisheries NZ proposed TAC increase for ORH 3B

Table 2: Proposed ORH 3B Sub-QMA catch limits, TACCs, TACs and allowances in tonnes from 1 October 2018

	Current year	Year 2 (2019/20)	Year 3 (2020/21)
TAC	6413	↑ 7116	↑ 8055
TACC (for all sub-QMAs)	6091	↑ 6772	↑ 7667
Allowance for other mortality caused by fishing	317	↑ 339	↑ 383
Customary Māori allowance	5	5	5
Northwest Chatham Rise	1150	1150	1150
East & South Chatham Rise	4095	↑ 4775	↑ 5670
Puysegur	347	347	347
Arrow Plateau	0	0	0
Sub-Antarctic	500	500	500

Table 7: Fisheries NZ proposed TAC increase ORH 7A and Westpac Bank

Option	Total Allowable Catch (tonnes)	Total Allowable Commercial Catch (tonnes)	Allowances		
			Customary Māori (tonnes)	Recreational (tonnes)	All other mortality to the stock caused by fishing (tonnes)
Option 1 (Status quo)	1680	1600	0	0	80
Option 2	2163 ↑ (29%)	2060 ↑ (29%)	0	0	103 ↑ (29%)
Option 3	2310 ↑ (38%)	2200 ↑ (38%)	0	0	110 ↑ (38%)
Option 4	2555 ↑ (52%)	2433 ↑ (52%)	0	0	122 ↑ (52%)

87. Challenger Plateau orange roughy is a straddling stock, which means that the biological stock extends across the boundary of New Zealand's exclusive economic zone (EEZ) and onto the High Seas in the area known as Westpac Bank. The Westpac Bank portion of the stock falls within the jurisdiction of the South Pacific Regional Fisheries Management Organisation (SPRFMO), which has a mandate to manage benthic fisheries, including orange roughy fisheries, within the SPRFMO Convention area (on the High Seas).

88. Forest & Bird does not support any of the options proposed by Fisheries NZ to increase the TAC for ORH 3B or ORH 7A or Westpac Bank. ORH7A catch limits should not be adjusted until the science and proposals have been reviewed by the SPRFMO Scientific Committee and Commission. There should be no increase in the Chatham Rise catch limits until comprehensive measures are in place to protect habitats of significance to fisheries management including seamounts and similar features.

89. The South Pacific RFMO Convention in Article 4 requires that national measures be compatible with high seas measures, as does the UN Fish Stocks Agreement in Article7[12] . There is no consideration of this requirement in the discussion paper.

90. On benthic impacts (ORH 7A): *"In the Westpac Bank Area, fishing vessels must comply with the SPRFMO Bottom Fishing Conservation and Management Measure which specifies where fishing may take place, and implements an 'encounter protocol', which closes a specified tow path to all fishing if benthic organism bycatch thresholds are reached."*

91. As the DSCC highlighted in their submission the science tells us that a single trawl is capable of doing long-term damage to such ancient ecosystems, and proactive scientific investigation can identify where those deep sea features occur in order to protect them before such damage is done. The government must immediately fully protect any areas known to contain seamounts or found to harbour deep water coral and sponge communities.

92. Forest & Bird supports the DSCC recommendations that the government must strengthen the "*encounter protocol*" and "*move-on rule*" adopted by SPRFMO, and apply it within NZ waters[13]. Bycatch limits under the weak SPRFMO rules (which New Zealand was responsible for proposing) allow a vessel to bring up as much as 249 kg of stony corals and 59 kg of true soft corals, 308 kg in total, in a single trawl without having to move their fishing spot.

93. The Government must adopt bycatch limits and move-on rules stronger than the weak ones applied by SPRFMO, to ensure that they protect deep sea coral forests from further damage. Deep sea coral forests are biodiversity hotspots, and only a small fraction of what is destroyed on the seabed comes up in the net. It must then apply stronger protection measures to all bottom fisheries in the New Zealand EEZ, in combination with the proactive closure of all known seamounts and similar seabed features to bottom fishing and seabed mining.

94. Forest & Bird does not support any bottom trawling on seamounts or similar deep sea benthic features. We recommend Fisheries NZ fully protects all known

[12] First Global Integrated Marine Assessment (First World Ocean Assessment), United Nations (2016). Chapter 51 - Biological Communities on Seamounts and Other Submarine Features Potentially Threatened by Disturbance. https://www.un.org/Depts/los/global_reporting/WOA_RegProcess.htm

[13] New Zealand (2018) A proposal for a revised Bottom Fishing Conservation and Management Measure for SPRFMO. COMM 7 – Prop 03.1. Submission of New Zealand, 7th Meeting of the Commission of the South Pacific Regional Fisheries Management Organisation, The Hague, The Netherlands, 23 to 27 January 2019. https:/www.sprfmo.int/assets/0-2019-Annual-Meeting/COMM-7/Prop/COMM7-Prop03.1-Background-paper-to-COMM7-Prop03-NZ.pdf

seamounts or similar deep sea benthic features and undertakes impact assessments before any new bottom trawling occurs outside the existing trawl footprint to identify any such features for protection.

95. Forest & Bird calls for the government to stop issuing high sea permits to NZ bottom trawl vessels to fish in international waters on seamounts or similar deep sea benthic features.

Paua (PAU 4 Chatham Island):

96. Pāua have always been a food source for Māori, and are culturally important . Pāua are also highly valued by recreational and the commercial fishers. Most of the fishery is made up of the black-foot pāua (*Haliotis iris*), while yellow-foot pāua (*Haliotis australis*) are only caught in small numbers.

97. There is no adequate stock assessment information to inform Fisheries NZ. But the "best available information is commercial catch and effort data and anecdotal information from fishers. This information suggests that the fishery is declining". Given this Fisheries NZ are proposing 4 Options, see Table 8.

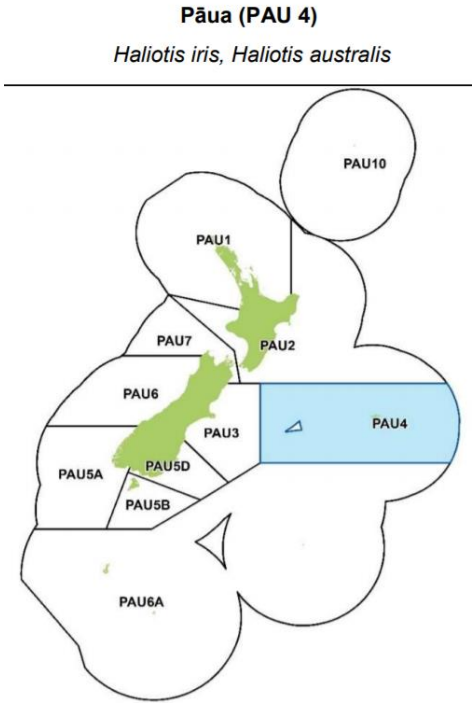


Table 8: Fisheries NZ TAC proposal for PAU 4

Option	Total Allowable Catch	Total Allowable Commercial Catch	Allowances		
			Customary	Recreational	All other mortality to the stock caused by fishing
Option 1	334	326	3	3	2
Option 2	301.4	293.4 ↓ (10%)	3	3	2
Option 3	269	261 ↓ (20%)	3	3	2
Option 4	236.2	228.2 ↓ (30%)	3	3	2

98. Forest & Bird acknowledges the legal proceedings that have occurred but strongly opposes shelving ACE as a sustainably management decision. However, given there is a recently approved PAU 4 Fisheries Plan which includes a requirement for

commercial fishers to voluntarily shelve PAU4 ACE we recommend a 5th Option is put forward.

99. Fisheries NZ state under the PAU 4 Annual Operating Plan for 2019-20, PAU 4 quota owners have committed to: *"…achieve a level of 40% ACE shelving (assuming a TACC of 326.543 tonnes)"* and *" If the PAU4 TACC is cut from 1 October 2019, the level of ACE shelving may be reduced in order to achieve a total commercial harvest reduction of 40%."*

100. According to Fisheries NZ, Option 1 status quo (no reduction) and Option 2 will not address the ongoing abundance decline. "*Option 2 would set a TAC that reduces the TACC by 10%. Given that the shelving of 10-20% of ACE in the 10 years before the 2017 stock assessment did not address the decline in abundance, this option, on its own, is also likely to be inconsistent with the objective of maintaining the stock at or above, or moving the stock towards or above, a level that can produce the MSY*".

101. Option 3 would set a TAC that reduces the TACC by 20% and according to Fisheries NZ on its own "*reducing the TACC by 20% may not rebuild PAU 4 towards MSY, or may not rebuild it to this level over an appropriate timeframe*". Based on this, Forest & Bird is recommending that Options 1, 2 and 3 are removed from the final advice paper and only Option 4 and an additionally precautionary 5th Option based on the PAU 4 shelving agreement of 40% is put forward.

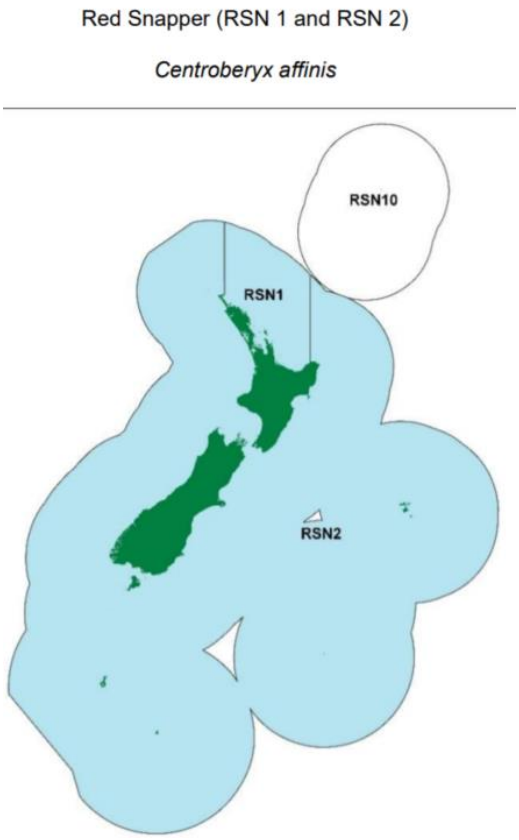
102. Option 4 would set a TAC that reduces the TACC by 30%. Fisheries NZ state that the this is the "most likely of the four TAC options to move the PAU4 stock towards or above, a level that can produce the MSY, and places less weight on the effect that the plan is expected to have in contributing to the biomass being restored to a level that will produce MSY".

103. A 5th Option Forest & Bird recommends is to set a TAC that reduces the TACC by 40% which aligns with the approved PAU 4 Fisheries Plan which includes a requirement for commercial fishers to voluntarily shelve 40% PAU4 ACE.

104. Forest & Bird has no environmental concerns with how paua are harvested within PAU 4.

Red snapper (RSN 1 & 2 All NZ):

105. Red snapper are found on the east and west coast northern waters of New Zealand usually in waters deeper waters up to 400m and usually in association with deep coastal reefs. Red snapper can also be found in shallower waters 20 m and in the open water. There has been very little biological research on red snapper, there is no information available on their reproduction but they are suspected to live to around 40 years. Conflicting information suggests that red snapper could actually live up to 80 years (Leachman et al., 1978 cited in 2009 Ministry report[14]) indicating red snapper are long lived and likely slowly reproducing which would make the species more susceptible to overfishing.



106. Red snapper are caught as bycatch in the longline snapper fishery on the east coast, and in the inshore trawl and set net fisheries on both the east and west coasts.

107. There is limited information available on landings which show high catches in the mid 90's crashing down to the levels being caught in the more recent years for RSN1 and fluctuating catch rates which have been exceeding the TACC for the past few years in RSN2 (refer to Figure 3).

[14] https://fs.fish.govt.nz/Doc/21776/78_RSN_09.pdf.ashx

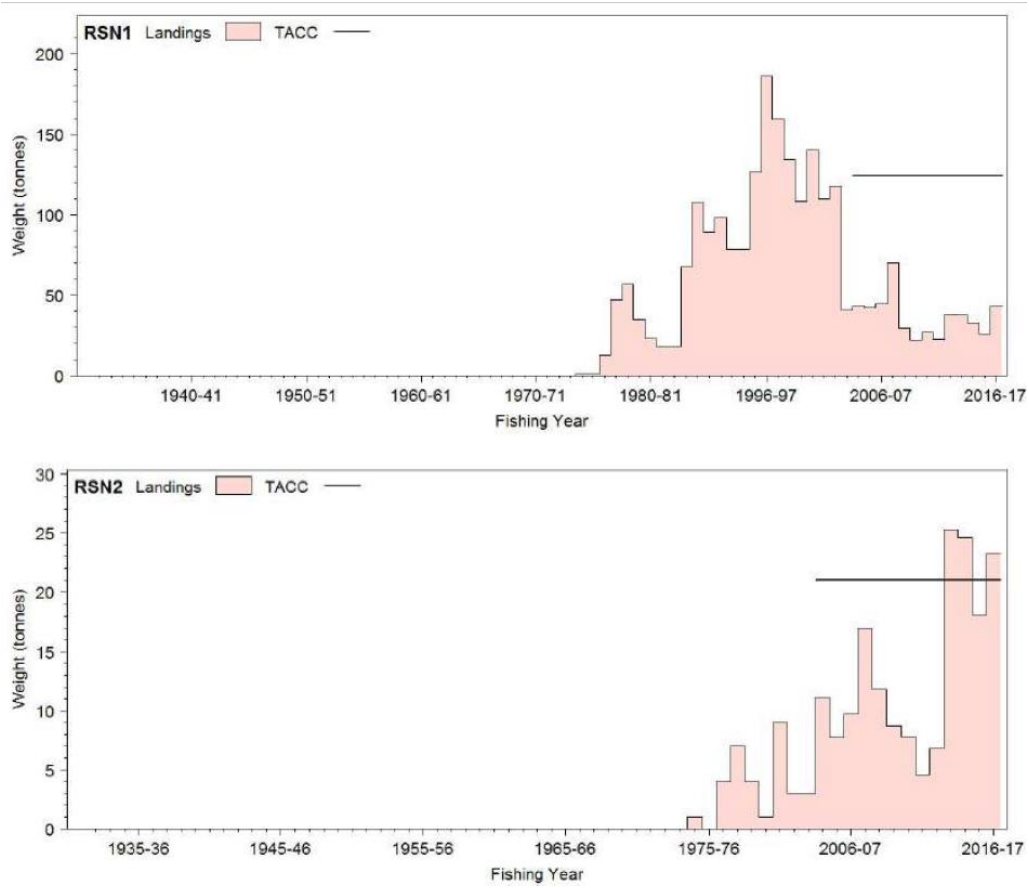


Figure 3: Fisheries NZ landings for RSN 1 and 2

108. There is no information to justify the current TAC levels or increasing TACs. There has been no research to determine if RSN 1 and RSN 2 are even separate biological stocks. "*There has been no stock assessment of red snapper to determine the biomass that can support the maximum sustainable yield (BMSY), and the reference and current biomass are unknown for both RSN 1 and RSN 2. Consequently, it is not known whether the recent catch levels are sustainable, or what the stock status of RSN 1 and RSN 2 are relative to BMSY (the default biomass target)".*

109. Despite this lack of information Fisheries NZ is proposing to reallocate the TAC and TACC between RSN 1 (the bycatch quota not being caught in recent years) and RSN 2 to reflect that commercial fishers are catching more red snapper in the RSN 2 area (see Table 9).

Table 9: Fisheries NZ TAC proposal for RSN 1 and 2

Option	Stock	Total Allowable Catch (tonnes)	Total Allowable Commercial Catch (tonnes)	Allowances		
				Customary Māori (tonnes)	Recreational (tonnes)	All other mortality to the stock caused by fishing (tonnes)
Option 1 *(Status quo)*	**RSN 1**	140	124	2	13	1
	RSN 2	25	21	2	1	1
Option 2	**RSN 1**	80↓ (43%)	64 ↓ (48%)	2	13	1
	RSN 2	85↑ (340%)	81↑ (386%)	2	1	1

110. Forest & Bird does not support Option 2 to increase the TAC or TACC for RSN 2 as there is no scientific or basic biological information on the stock to justify if this is sustainable. Anecdotal evidence from older recreational fishers and divers Forest & Bird spoke to is that red snapper particularly in the RSN 1 area have virtually disappeared but were frequently seen while deeper fishing and diving. Anecdotal evidence alongside the landings data suggest red snapper in RSN 1 have declined.

111. For RSN 1 Forest & Bird does not support Option 1 status quo.

112. For RSN 1 Forest & Bird does not support Option 2. Forest & Bird recommends an alternative Option 3, that reduces the TAC for RSN 1 to 60t and TACC to 44t (customary, recreational and other sources of mortality remaining the same) to better reflect what is occurring in the fishery while a stock assessment and research on red snapper is undertaken.

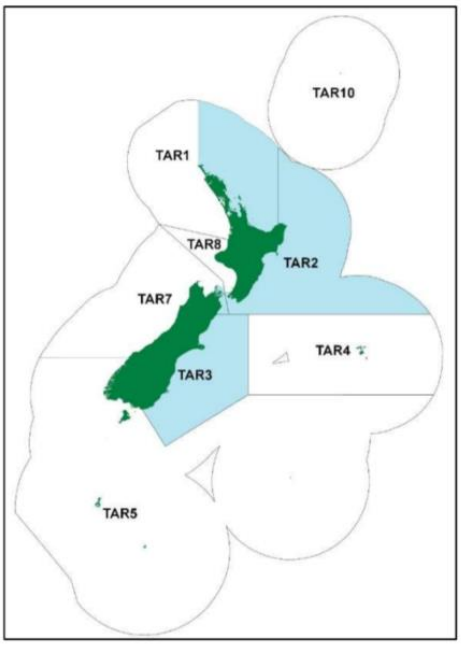
113. For RSN 2 while there has been an increase in recent years in commercial catch this likely reflects the increase in fishing effort for the fisheries in which red snapper is caught as bycatch. Until there is any information about the stock status and basic biological information Fisheries NZ needs to apply a precautionary approach and not increase the RSN 2 TAC or TACC. Forest & Bird does not support Option 2 for RSN 2 but does support Option 1 for RSN 2 – status quo.

114. We understand red snapper is primarily caught as bycatch, but without any information there is no justification for increasing commercial quotas, and there is little evidence to justify keeping existing quotas for both recreational and commercial fishers. Fisheries NZ must invests in essential research and science to better understand red snapper stocks and support and encourage commercial fishers to be more selective in their fishing.

Tarakihi (TAR 1,2,3 & 7 ECNI and ECSI):

Tarakihi (TAR 1, TAR 2, TAR 3 and TAR 7)

Nemadactylus macropterus; tiki



115. Tarakihi is a relatively long-lived slow growing fish found between 30 – 250 m depths. Generally younger fish prefer southern east coast waters and older fish move north and prefer northern east coast waters. Tarakihi are an important fish not only for commercial fishers but for customary Maori and recreational fishers.

116. Tarakihi have been severely overfished. In 2018 Fisheries NZ released the 2017/2018 stock assessment which found east coast tarakihi stock was down to 17% BO (unfished biomass). Given the biological characteristics of tarakihi, such as having low productivity meaning it is highly susceptible to overfishing as it is less resilient, this stock assessment highlighted the need for immediate reductions in the total allowable catch (TAC).

117. Fisheries NZ policy, the Harvest Strategy Standard (HSS) guidelines are clear, when a stock reaches a critically low point and drops below the soft limit reference point of 20% unfished biomass, like tarakihi east coast stock "*a formal, time-constrained, rebuilding plan be implemented, aimed to rebuild the stock to at least the target level within an appropriate timeframe*" and that for this low-productivity species the "*target biomass of 40% of the unfished biomass is appropriate*" (Harvest Strategy Standard, 2008).

118. Forest & Bird alongside with thousands of New Zealanders submitted on the 2018 consultation. The Minister reduced the TAC[15] and TACC by 20% knowing this wouldn't be significant enough to rebuild tarakihi to a 40% BO target within 10 years, but as a first step.

119. Since the Minister's decision the fishing industry has done two things; 1. funded another updated stock assessment and, 2. developed their own management proposal.

[15] Minister Nash's decision letter included:

- Biomass target of 40% (unfished biomass)
- Rebuild timeframe of 10 years
- Acknowledgement that a 20% reduction will only begin the rebuilding but would not rebuild stock to target and within timeframe without further measures

120. The updated 2019 stock assessment estimates the spawning stock biomass has further declined to 15.9% BO (unfished biomass in 2018).

121. As part of the 2018 Minister's decision Fisheries NZ is seeking feedback on additional measures to ensure tarakihi stocks on the east coast rebuild. Fisheries NZ have released the industry's proposal[16] as part of this consultation. The Table 10 shows a summary of the three options Fisheries NZ are proposing.

Table 10: Fisheries NZ TAC proposals for tarakihi and industry option

	Option 1	Option 2	Option 3
Target	40% SB_0	40% SB_0	35% SB_0
Rebuild timeframe (years) (Rate)	12 year, or 2.4*T_{min}	11 years, or 2.1*T_{min}	< 27 years, or 6.75*T_{min} Industry has indicated that the management actions outlined in its plan will contribute to a faster rate of rebuild, but the actual time frame is unclear.
Method of achieving target (Way)	Catch reductions: 31% reduction in TACC; implemented in 2019/20	Catch reductions: 35% reduction in TACC implemented in 2019/20	Industry Rebuild Plan: catch spreading, move on rules, and increased fishing selectivity to avoid juvenile/ unwanted fish.

122. Forest &Bird does not support any of the options put forward by Fisheries NZ. In order for tarakihi to rebuild following the HSS policy, to a target of 40% BO within 10 years (as agreed by the Minister) with a 70% probability the TAC and TACC must be reduced by 40% (65% from the 2017 TACC). Forest & Bird supports LegaSea and the NZ Sports Fishing Council's proposal to put forward this option.

123. Forest & Bird does not support the commercial fishing industry's proposal which would not deliver a time bound rebuild of the east coast tarakihi stock. The proposal has no clear rebuild time. The industry has already been using gear changes and the proposal is largely based on more research and some unclear move on rules. The industry proposal does not meet the requirements of the HSS policy or the Minister's 2018 decision expectation. Forest & Bird does not support that innovation described in the industry proposal is simply trawlers towing larger mesh nets for longer time to catch the same tonnage of tarakihi.

124. The industry rebuild plan highlights catch selectivity trials. Forest & Bird would welcome industry innovation and catch selectivity research and trials but this work shouldn't stop the Minister making the appropriate sustainability decision based on

[16] https://www.fisheries.govt.nz/dmsdocument/35208-tarakihi-management-strategy-and-rebuild-plan-2019

the best available science and the HSS policy. The industry should be investing in catch selectivity research regardless of the state of the east coast tarakihi stock. This research should not only focus on reducing juvenile tarakihi bycatch, but must focus on reducing bycatch of ETP species like seabirds, dolphins and other fish.

125. Forest & Bird does not support bottom trawling. A significant proportion of tarakihi is caught by inshore bottom trawl fisheries. Bottom trawling destroys benthic ecosystem, which many fish including tarakihi rely on and must be reduced. Forest & Bird welcomes industry gear selectivity and would encourage gear modification that also reduces benthic impacts.

126. Forest & Bird welcomes the industry proposal to report more accurately and build a database where "*fishers will record data on gear type and configuration through using electronic reporting to log important net details for each haul*". This will be useful information, especially when paired with the regulatory electronic monitoring requirements being rolled out. F&B supports this important monitoring first step but would highlight that fisheries independent observer information is crucial and would encourage industry to support the roll out 100% observer coverage through digital monitoring with cameras alongside at sea observers.

127. Forest & Bird fully agree with industry that reporting sub-minimum legal size tarakihi is essential and that this should be a requirement. More than 80% of the 2017 TAC was caught by commercial bottom trawl and a targeted set net fishery off Kaikoura (TAR 3). In TAR 3, a high proportion of the bottom trawl catch is composed of immature fish. Given this, and the serious stock status in 2018 Forest & Bird recommended Fisheries NZ investigate temporal closures within the TAR 3 fisheries area based on where the most important juvenile habitats and waters used by immature fish are. It is disappointing both industry and Fisheries NZ have failed to progress this work over the last 12 months.

128. In the industry proposal there is mention of spatial measures and voluntary closed areas, however there was no further detail. Forest & Bird strongly recommends temporary closures of important juvenile grounds within TAR 3 (and any other identified areas). This would complement the TAC reductions and support the stock rebuild while the fishing industry invests in gear selectivity. Fisheries NZ should further investigate spatially where these nursery grounds are and the fishing industry's voluntary reporting of juvenile tarakihi landings alongside digital catch location information should support this work. This is of high priority.

129. Forest & Bird was disappointed the industry proposal didn't acknowledge the impact the tarakihi fisheries have on ETP species, particular the east coast South Island on hectors dolphins and hoihoi. Fisheries NZ also did not accurately report on the impact on ETP species. The Hector's and Maui dolphins Threat Management Plan (TMP) highlights that the east coast South Island inshore trawl annually kills a mean of 8.6 hectors dolphins and set net annually kills a mean of 42.4 hectors dolphins. A proportion of these estimated deaths will occur from tarakihi fisheries.

130. The TMP proposes set net and trawl exclusions extensions along the east coast of the south island which if implemented will have multiple species and ecosystem services benefits, such as seabirds like critically endangered hoihoi but they would also protect juvenile tarakihi. Fisheries NZ should look at these TMP extensions when spatially mapping juvenile tarakihi areas.

131. Reducing the TAC and TACC by 40% (65% from the 2017 TACC) to rebuild tarakihi east coast stock should reduce the inshore trawl effort and possibly set net fisheries effort. This will likely reduce the risk these fisheries pose to some ETP species.

132. Forest & Bird has concerns over the industry's narrow economic view. Forest & Bird recommend Fisheries NZ promotes that short-term economic loss need to be considered in the context of the value of a fully rebuild fishery and the potential benefits from a more rapid rebuild. We would also highlight the economic impact to NZ's international brand should Fisheries NZ ignore science and fisheries policy (HSS) when promoting a final management option to the Minister.

133. Forest & Bird supports that charter operators should report all catch.

134. Fisheries NZ should include information on the level of observer coverage planned across the inshore trawl, set net and longline fisheries that either target or catch tarakihi. Based on Ministry reports misreporting, underreporting and dumping does occur in NZ fisheries. Given tarakihi TAC and TACC will need to be significantly reduced to rebuild the stock as required by the HSS the finial advice to the Minister needs to include a statement around the need for additional observer coverage. A combination of at sea monitoring and digital e-monitoring is appropriate, to ensure that these TACC reductions and deemed values increases doesn't result in an incentive to dump or high grade tarakihi or other fish.

Top of the South Island trawl fishery (JDO 7, GUR 7, ELE 7, SPO 7):

1 Stocks being reviewed

Red gurnard (GUR 7)
(Chelidonichthys kumu), Kumukumu

Rig (SPO 7)
(Mustelus lenticulatus), pioke, makō, mango

John dory (JDO 7)
(Zeus faber), Kuparu

Elephant fish (ELE 7)
(Callorhinchus milii), Reperepe

Flatfish (FLA 7)
(flounders, soles, brill and turbot species), Patiki

Snapper (SNA 7)
(Pagrus auratus), Tamure, Kouarea

Figure 1: The Challenger/Central (Plateau) Quota Management Area 7 with the Top of the South Trawl Fishery Area (indicative area shaded yellow).

135. Fisheries NZ is proposing to increase the TAC for a number of species that are caught together in the Tasman and Golden Bays mixed trawl fishery, the stocks are GUR7, SPO7, JDO7 and to introduce ELE7 into the QMS (see Table 11).

Table 11: Fisheries NZ TAC proposals for top of the South Island mixed trawl fishery

Table 3: Current and proposed TACs, TACCs and allowances in tonnes for red gurnard, rig, John dory and elephant fish.

Stock	Option	Total Allowable Catch (t)	Total Allowable Commercial Catch (t)	Allowances		
				Customary Māori (t)	Recreational (t)	All other mortality caused by fishing (t)
GUR 7	Option 1 *(Status quo)*	1,065	975	15	25	50
	Option 2	1,176 ↑	1073 ↑ (10%)	15	38 ↑ (50%)	50
	Option 3	1,273 ↑	1170 ↑ (20%)	15	38 ↑ (50%)	50
SPO 7	Option 1 *(Status quo)*	346	271	15	33	27
	Option 2	373 ↑	298 ↑ (10%)	15	33	27
	Option 3	400 ↑	325 ↑ (20%)	15	33	27
JDO 7	Option 1 *(Status quo)*	226	209	2	4	11
	Option 2	247 ↑	230 ↑ (10%)	2	4	11
ELE 7	Current setting		102			
	Option 1	127	102	5	10	10

136. Forest & Bird does not support any increase in inshore trawl fishing effort in areas where Hector's or Maui dolphins are known to forage until the new Threat Management Plan is implemented and 100% observer coverage is required.

137. Population estimates are unclear for Hector's dolphins in the Golden Bay/Tasman Bay area, 2 separate surveys gave point estimates of zero and 271. The estimated trawl death is .30 animals per year. The spatial patterns of dolphin distribution are not well estimated. The mean estimated number of captures per year is 1 animal with 95th % CI of 2.3 (for set net and trawl). However the population cannot afford to lose more than 1 animal a year to fishing. The genetics of dolphins in Golden Bay is not entirely resolved, there are shared haplotypes between animals from this area and Hector's haplotypes that have been found within the Maui population (that do not have Māui haplotype). This represents a potentially important stepping stone population between the ECSI and WCSI populations, the loss of which would cause fragmentation of the species, and they represent a probable feeder population for gene flow to the Māui dolphin population. Whilst the habitat models and sightings database identify some potential key habitats within Golden and Tasman Bays, how the dolphins use the broader area is unresolved. Forest & Bird recommends using a precautionary habitat for the dolphins out to the 100m depth contour, with the exclusion of trawl and set net fisheries in this area.

138. Outside of this depth contour in Golden an Tasman Bays Forest & Bird would support the top of the South Island mixed trawl fishery provided it has 100% observer coverage.

139. Red gurnard (GUR7) have a fast growth rate and relatively short lifespan and whilst the stock appears to have large fluctuations in recruitment Fisheries NZ considers "*GUR 7 to be very likely (>90% probability) to be at or above target levels. The proxy BMSY target limit for this fishery is 460 tonnes with a soft limit of 50% of the target and a hard limit of 25% of the target*".

140. For GUR7 Forest & Bird supports increasing the TAC by 10% - Option 2, however this is only based on the requirement above to protect Hector's dolphin foraging habitat and 100% observer coverage.

141. Rig, commonly known as 'lemon fish' or spotted dogfish, are small sharks found in coastal waters all around New Zealand. Compared to most other shark species rig are fast growing. Of concern to Forest & Bird is that the relationship between adult populations and their nurseries is poorly understood. More research is needed to better understand more about their habitats, movements, nursery grounds and vulnerability to human impacts to ensure rig are managed sustainably.

142. Forest & Bird does not support the proposed TAC increase for rig SPO 7 until adequate monitoring has taken place particularly in the set net but also trawl fishery that operates within SPO 7 through Golden, Tasman and Cloudy Bays to provide best estimates of the interactions with endangered Hectors dolphins and seabirds including shags, penguins, petrels and shearwaters, regardless of the stock status of rig.

143. Forest & Bird believes the risk the SPO 7 fishery has around Tasman & Golden Bay (and Cloudy Bay to a lesser extent) is potentially significant due to the overlap with Hectors dolphin distribution supported by sightings data. Fisheries New Zealand has failed to highlight this.

144. Forest & Bird support Option 1 for SPO7, no change to the TAC or TACC. The trawl survey index since 2015 has been trending down over the last four years which indicates the stock is declining.

145. John dory are a fast growing inshore fish and in 2018 Forest & Bird supported a TAC increase provided there was increased monitoring of the fishery. Fisheries NZ state that "*the stock is currently at a relatively high level, and previous high catches appear to have been sustained by intermittent high recruitment*". However, preliminary results from the 2019 west coast South Island survey indicate that john dory biomass is declining. Based on these preliminary results Forest & Bird supports Option 1, status quo no change to the TAC, TACC or other allowances.

146. Forest & Bird supports the use of data from fisheries independent surveys.

147. Fisheries NZ is proposing to set a TAC for elephant fish (ELE7) for the first time. Fisheries NZ describe ELE 7 as "*relatively low knowledge stock, with a TACC set at 102 tonnes when the QMS was introduced in 1986*". Setting a TAC seems uninformed. Forest & Bird does not support Option 1 to increase the TAC for ELE 7 but support the status quo option of keeping the TAC at 102 t until more research is carried out to better inform stock decisions.

Thank you for the opportunity to comment. For any questions please don't hesitate to contact Forest & Bird.

Sincerely,

[redacted]
Marine Conservation Advocate at Royal Forest & Bird Protection Society of NZ
[redacted]

From: [redacted]
To: FMSubmissions
Subject: SPCA Submission on the Review of sustainability measures for 1 October 2019
Date: Friday, 26 July 2019 5:10:01 PM
Attachments: image003.jpg
RNZSPCA Submission - Review of Sustainability Measures for 1 October 2019 - 26th July 2019.pdf

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Dear Sir/Madam,

Please find attached the SPCA submission on the proposed changes to the sustainability measures and management controls for selected fish stock.

Please let me know if you have any questions or would like any additional information.

Best wishes,

[redacted]

[redacted] BSc., GDipNFPL, GDipHE, MSc., MSc.(*Hons*), PhD
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Make flexibility work *- if you receive an email from me outside of normal business hours, I am sending it at a time that suits me. Unless I've marked it urgent, I'm not expecting you to read or reply until you can during normal business hours.*

Submission by the Royal New Zealand Society for the Prevention of Cruelty to Animals Inc. on the Review of Sustainability Measures for 1 October 2019

26th July 2019

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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 have 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 39 Animal Welfare Centres across New Zealand and over 80 inspectors appointed under the Animal Welfare Act 1999.

SPCA welcomes the opportunity to make a submission on the Review of Sustainability Measures for 1 October 2019.

Submission

SPCA would like to thank Fisheries New Zealand for the opportunity to provide comments on the Review of Sustainability Measures for 1 October 2019. Below we have made suggestions on the proposed changes to the sustainability measures and management controls for selected fish stocks. Overall, SPCA hopes that the decision is made to prioritise ensuring the sustainability of fish stocks and protecting species and the environment in the waters around New Zealand.

Gemfish, SKI 3 and 7

SPCA acknowledges that data from fishery-independent trawl surveys and catch-per-unit-effort analysis indicates these gemfish stocks have increased in recent years. However, the Society urges caution in relation to Fisheries New Zealand's proposal to rapidly increase both the total allowable catch (TAC) and the total allowable commercial (TACC) for these two stocks.

Our organisation advocates that Option 1 should be chosen for SKI 3, which will increase the TAC from 300 tonnes to 455 tonnes, and the TACC from 300 tonnes to 450 tonnes. SPCA disagrees with the proposal to increase the TAC for SKI 7 from 300 tonnes to 606 tonnes, and the TACC from 300 tonnes to 600 tonnes. The Society advocates that such a dramatic increase in TAC and TACC for SKI 7 is too much and will cause the stock to decline in the short and long term. Our organisation urges Fisheries New Zealand to take a long-term perspective to ensure the enduring sustainability of gemfish in both SKI 3 and 7.

SPCA notes that the Review of Sustainability Measures for Gemfish Discussion Paper states that: "the Working Group considered that the stock assessment model was not sufficiently reliable to provide estimates of current biomass and/or stock status." This shows that the data on gemfish stocks is still unclear and so the Society urges a precautionary approach is taken in deciding catch limits for this species.

The Society notes that the proposed increases in catch limits are said to be "unlikely to result in a gemfish biomass reduction over the short term"; however, our organisation advises that a more gradual increase in catch limits should be selected so that there is no decline in stocks over the short and long term.

SPCA urges that the options selected must have the least environmental impact on the oceans and fish stocks. As gemfish are principally taken as bycatch through little effort at present, Option 1 for SKI 3 is unlikely to result in an increase in the level of commercial fishing effort to target gemfish which is preferred. Option 2, on the other hand, is a 106% increase of the TAC and 100% increase of the TACC for SKI 3. These figures are unsustainable and unacceptable and could result in a material increase in the level of commercial fishing effort targeting gemfish and, therefore, a corresponding dramatic impact on the environment. The Society notes that the Deepwater Working Group did not comment on the likely effect of catches that would be permitted by Option 2, and our organisation advises that this must prevent Option 2 from being selected because Fisheries New Zealand cannot head in a direction for which the consequences have not be thoroughly considered and explained.

As stated, SPCA rejects Fisheries New Zealand's only proposal regarding SKI 7 which seeks to increase the TAC by 106% from 300 tonnes to 606 tonnes, and the TACC from 300 tonnes to 600 tonnes. The Discussion Paper states that the Deepwater Working Group considers that catches at current levels are unlikely to result in a reduction of biomass over the next 1-3 years; however, this proposal is for an unsustainable increase in permitted catch which would clearly have a detrimental, and potentially devastating, effect on the biomass reduction over the same period. The Society is disappointed by the lack of recognition of the potential environmental impacts of the proposed SKI 7 catch limit increases of 106% and 100% which are stated to be "negligible" and warns that this increase is likely to result in a rise in the level of commercial fishing effort targeting gemfish. Our organisation advocates that SKI 7 should have the same options for catch increases as SKI 3, which would increase the TAC for SKI 7 from 300 tonnes to 455 tonnes, and the TACC from 300 tonnes to 450 tonnes.

Elephant fish, ELE 7; Gurnard, GUR 7; John dory, JDO 7; and Rig, SPO 7

SPCA rejects the proposed increases to the total allowable catch (TAC) for red gurnard, rig, and John dory. The Society advocates that Options 1 (status quo) should be selected for red gurnard, rig, and John dory for the reasons discussed below. The Society entirely rejects Options 2 and 3 for red gurnard, rig, and John dory as our organisation believes that these are seeking economic benefits at the expense of sustainability.

SPCA does not agree that the statistics support the proposal by Fisheries New Zealand to increase catch limits of these stocks. The Discussion Paper notes that there is uncertainty associated with the scientific and other available information on these stocks. Our organisation is concerned that the desire to increase TAC rates so willingly when species are not conclusively shown to be stocked well above target is not environmentally responsible or sustainable for commercial fisheries or for New Zealand's waters.

The Discussion Paper states that preliminary results from the 2019 WCSI trawl survey indicate a decline in relative biomass of John dory. This information must be prioritised and should not result in an increase to the allowable catch limits.

As is pointed out in the consultation material, changes to the TAC and TACC for one stock in this multispecies fishery will likely have effects on the other stocks that are caught with it. Deciding to increase the TACC for gurnard, rig or John dory are likely to result in an increase in bycatch of the other fish species. For this reason, the Society urges that Option 1 is selected for all fish being discussed in this part of the consultation.

The Society notes that there are plans to set a TAC for elephant fish even though the data has not shown that the stock levels for this fish are above target. The Discussion Paper states that elephant fish numbers are "about as likely as not to be at target", which is not conclusive. The

statistics and projected figures for elephant fish stocks are not said to be as reliable as for other species in the Discussion Paper and so the Society rejects the setting of TAC figures based on potentially inaccurate information. SPCA is disappointed that only one TACC option is proposed for ELE 7 (Option 1), which leaves no space for discussion or consideration of figures. Elephant fish are an elasmobranch and so have very low productivity, this means that they are less resilient to fishing pressure and take more time to rebuild from a depleted state than those species with high productivity. For this reason, our organisation urges greater caution in setting TAC for elephant fish.

The results of selecting TACs that are too high will be very harmful to the ecosystem and the environment, especially given the considerable damage known to be caused by trawling (Jones, 1992), the continuation of which our organisation does not support. Therefore, the Society urges that Fisheries New Zealand take a precautionary approach when considering how to manage TAC figures in this fishery.

Hake, HAK 7

SPCA is concerned that the stock assessment for hake in HAK 7 indicates the stock is likely to be below the soft limit, requiring the implementation of a time-bound rebuilding plan. SPCA advocates that Option 3 should be selected in order to initiate the rebuilding plan: reducing the TAC by 3,664 tonnes, from 5,064 to 1,400 tonnes.

The Society is concerned about the hake fishery's environmental impact and urges that a reduction in effort of the HAK 7 target fishery is needed in order that there is a reduced trawl footprint for this fishery. Our organisation supports Option 3 in order to promote a more sustainable rebuilding of the fishery and in recognition that a dramatically reduced TAC and

TACC will enable the fishery to benefit from a more rapid rebuild.

Given that the Deepwater Fisheries Working Group has noted the major sources of uncertainty in the stock assessment, SPCA promotes Option 3 as the right precautionary approach to take in these circumstances.

Hoki, entire New Zealand coast

The Society is concerned that the stock assessment for hoki indicates that the stock is potentially below the management target range. Our organisation supports moves by Fisheries New Zealand to reduce both the total allowable catch (TAC) and the total allowable commercial catch (TACC) for this species.

SPCA advocates that of the two options to reduce the TAC and TACC for HOK 1, Option 2 must be selected that would reduce the TAC from 151,540 to 121,340 tonnes (a 20% decrease), and the TACC from 150,000 to 120,000 tonnes. The Society advises that the hoki catch limit should be varied accordingly in response to the current estimate of stock status and the projected impacts of catch levels on each stock.

Given that there is so much uncertainty relating to the data inputs and assumptions of the stock assessment model, including stock structure and migration patterns, and conflicting signals between biomass indices and age composition data, SPCA promotes Option 2 as the right precautionary approach to take in these circumstances.

The Society feels that this change is particularly necessary and important given the hugely negative environmental impact of the hoki fishery, especially the bycatch of marine mammals,

birds and benthic impacts. Our organisation urges that there must be a reduction in effort of the hoki fishery and an overhaul of trawl fishing practices in order that there is a less devastating trawl footprint for this fishery. Bottom trawling is the most destructive ways to catch fish and is said to be responsible for up to half of all discarded fish and marine life worldwide (Kelleher, 2005).

Kina, SUR 1A and 1B

SPCA notes that it is difficult to determine the stock status for sedentary species such as kina and so the Society advocates that Option 1 is chosen for SUR 1A and 1B, which will maintain the status quo with no increases in total catch. Our organisation promotes this outcome as we feel that it is essential to take into account the experiences of sea urchin fisheries in other parts of the world, where depletion and overfishing is known to have occurred. The Society advises that a cautious approach must be taken and increases to catches deferred until digital monitoring has been implemented and finer scale information is available to better understand the status of the stocks.

As is stated in the Discussion Paper, "it is not known if current catch levels or management settings are sustainable, or if they are at levels which will allow the stocks to move towards a size that will support sustainable yields." Without knowing how kina stocks are impacted by fishing at this time, it is essential that the catch limits for kina are not adjusted. SPCA rejects that commercial fishers are a reliable source to determine whether more kina could be sustainably taken. At present, projections of kina biomass are currently unknown and so the Society insists that no alterations are made to the catch limits until more reliable information is available on the stock status of SUR 1A and 1B.

SPCA believes that Options 2 and 3 bring with them a significant risk to the sustainability of kina. In particular, the Society entirely rejects Option 3 which would result in a 50% increase to the TAC, TACC and allowances and warns against putting economic benefits ahead of environmental damage. Our organisation urges that the spatial patterns of non-commercial fishing for kina must be better understood before catch limit increases are considered for commercial fishing. SPCA supports the hand gathering of kina over damaging commercial fishing techniques as it is a low impact harvesting method which results in no by-catch of any associated or dependant species.

The Society urges that New Zealand learns from the examples of sea urchin fisheries in other parts of the world where depletion has raised significant concerns. An international review of sea urchin fisheries noted that there is a history of depletion around the world, including in Chile, France and parts of the United States (Andrew et al, 2002). This research shows that there must be a cautious approach to the management of kina in New Zealand.

Ling, LIN 7

SPCA notes that the Discussion Paper states that the "best available information indicates that the biomass of ling in LIN 7 is very likely to be at or above the management target". Our organisation rejects that stock levels "*at* the management target" should result in an increase in the catch limits for this stock.

Of the two options that Fisheries New Zealand proposes, the Society advocates that Option 1 should be chosen. However, our organisation is disappointed that there is no option in this consultation to select that the TAC and TACC for ling should remain at the status quo, which should always be a choice in consultation proposals.

Constant catch projections to 2022 as part of the LIN 7 WC stock assessment indicate that ling biomass is likely to remain about the same if future catches are around 3,000 tonnes, or if catches were to increase by around 10%; therefore, SPCA questions why catch increases of more than 10% are being proposed in this consultation. The Society rejects the claim stated in the Discussion Paper that "the proposed TAC/TACC increase under Option 2 [of 20%] is not expected to have any significant environmental effects" and advises that this option is avoided.

Orange Roughy 3B, ORH 3B

SPCA questions the need to increase the total allowable commercial catch when annual orange roughy landings from ORH 3B have been less than the TACC over the last ten years and the annual average under catch for the last ten years was 15%.

The Society opposes the increase in catch numbers for orange roughy because of the unacceptable impact that commercial fishing methods for this species have on the environment and fish bycatch. The proposed option will increase bycatch of associated and unintended species, namely smooth and black oreo and deepwater sharks. The Discussion Paper states that, based on the average annual smooth and black oreo catch from FMA 4 when targeting orange roughy over the last ten fishing years (2008/09 to 2017/18), it is estimated that the proposed TACC increase may lead to an increase of approximately 16 tonnes in black oreo caught, and approximately 67 tonnes of smooth oreo. These figures are unacceptable and must be avoided.

The statistics for the suspected increase in bycatch of deepwater sharks in relation to this proposal are not stated. SPCA is disappointed that the likely impact on deepwater sharks is not analysed, as we feel that the decision to increase the catch limits should not be made without the full ecological and environmental impacts being acknowledged. Our organisation is discouraged by the suggestion that interactions with deepwater sharks in orange roughy fisheries will be reconsidered by Fisheries New Zealand if impacts are found to pose a sustainability risk to any deepwater shark species. The Society does not condone management actions being taken after detrimental impacts are considered so severe that they should be acted upon – these aspects should instead be properly thought out and mitigated for prior to increases being considered.

The Society insists that the impact of increasing catch limits for orange roughy on oreo, deepwater sharks, and other unintended species is completely unacceptable. The bycatch figures stated above confirm research which has concluded that bottom trawling is unsustainable and extremely destructive for fish populations (Victorero et al., 2018). Bottom trawling is devastating for the seabed and benthic environment and alternative fishing methods must be sought if New Zealand's fisheries are to be truly sustainable.

Orange Roughy 7A

Of the four options being proposed for the total allowable catch (TAC) and total allowable commercial catch (TACC) for ORH 7A, SPCA advocates that Option 1 should be selected which would maintain the TAC at 1,680 tonnes and the TACC at 1,600 tonnes.

This is because orange roughy is fished using bottom trawl gear, which is known to have a significant detrimental impact on the benthic environment. The Society is against the deep

trawling of fisheries which is known to be an unsustainable and devastating method of fishing (Victorero et al., 2018). Our organisation believes that efforts should be made by Fisheries New Zealand to replace this method of fishing with other techniques that are more sustainable and environmentally viable long-term. The most common bycatch species caught in the ORH 7A fishery are spiky oreo and elasmobranchs, such as deepwater sharks. It is of great concern when low productivity species are caught due to the detrimental impact it can have on the area. Increasing the catch limits for the ORH 7A fishery will inevitably result in an increased bycatch and corresponding detrimental environmental impacts which must be avoided.

SPCA also proposes the selection of Option 1 because all other options presented will result in a decline in the stock status. Option 1 is the only one that will maintain the stock above the midpoint of the management target range for the next 8 years. This option would have the least environmental impact, particularly because it would not result in an increase in fishing activity

Our organisation rejects claims in the Discussion Paper which state that the increases in catch limits proposed for Options 2, 3 and 4 are not expected to have any additional impact on seabirds, marine mammals, or other fish species: an increase in fishing activity for ORH 7A would naturally result in this outcome. The Society also disagrees with the claim of Fisheries New Zealand that these options will not have any material additional impact on the benthic environment, particularly while it is also acknowledged in the consultation documentation that scope remains for fishing efforts to move within the area as a result of all three of these options. SPCA warns against putting economic benefits ahead of environmental damage.

Pāua, PAU 4

SPCA is concerned that pāua stock is believed to have declined significantly since 2001. The Society welcomes the proposed reduction of TACC for PAU 4 due to the sustainability risk associated with the depletion of pāua in this fishery. Our organisation advocates that Option 4 is selected which would set the TAC at 236.2 tonnes – 8 tonnes in allowances (customary 3 tonnes, recreational 3 tonnes, other mortality to the stock caused by fishing 2 tonnes) – and would cut the TACC by 30% (decrease from 326 tonnes to 228.2 tonnes).

Given the difficulty associated with reliably estimating the biomass of pāua, it is essential for Fisheries New Zealand to take the boldest steps in order for the population of pāua to stabilise and sustainably increase. With the best available information strongly suggesting that the fishery is declining and that there has been a substantial depletion of the resource, SPCA supports the largest cut in TACC figures (Option 4) as the most responsible approach to ensure that pāua stocks fully recover.

Red Snapper, RSN 1 and 2

Given that information on both stocks for RSN 1 and 2 is limited, SPCA is reluctant to endorse a TAC and TACC increase of up to 60 tonnes for RSN 2. The Society believes that data should be secured and verified before increases to catch limits are increased in any area. This is the only way to prevent the boom/bust stock levels that are likely to be occurring in RSN 1 and 2 and which must be avoided if the fishery is to be sustainable and environmentally viable in the long-term.

Our organisation supports part of Option 2 which would see a decrease in the RSN 1 TAC and TACC by up to 60 tonnes due to the information based on catch trends which indicates depleting stocks for RSN 1.

As the Discussion Paper points out, it is not known whether the recent catch levels are sustainable or what the stock status of RSN 1 and RSN 2 is, nor the biomass that can support the maximum sustainable yield. Due to red snapper being a low knowledge stock and a relatively unproductive species, SPCA urges caution in permitting the total TACC of RSN 1 and 2 increases, even if the statistics are a redistribution of numbers already allocated.

The Society echoes concerns from environmental and recreational fishing groups about the sustainability of red snapper based on their biological and ecological characteristics which may make it susceptible to localised depletion. Given that it is not known what factors influenced the significant decline in catch in RSN 1, our organisation recommends that time is allowed to confirm if a sustainability concern exists before making a decision to adjust the TAC, TACC and allowances for RSN 2.

Overall, SPCA advises against making a significant amount of additional RSN 2 annual catch entitlement (ACE) available because increased fishing effort, predominantly in certain areas, may result in localised depletion of red snapper stocks. If this happens, the biology of red snapper suggests that such depletion would be slow to recover. By increasing the allowance of RSN 2, there is also the risk that a target fishery may develop as a result of the proposed changes which seeks out assemblages of red snapper around reef structures, bringing with it significant detrimental impacts on the biological diversity in these areas and the red snapper stocks.

Tarakihi, TAR 1, 2, 3, and 7

SPCA welcomes the proposals to rebuild this stock and acknowledges the concerns for the sustainability of TAR 1, TAR 2, TAR 3 and TAR 7. The Society advocates that Option 2 is adopted which would introduce a 35% reduction to the combined TACC for TAR 1, TAR 2, TAR 3 and TAR 7. This proposal is preferred because it will achieve the highest target of 40% SB0 within the shortest timeframe and it conforms to Fisheries New Zealand's Harvest Strategy Standard.

Given that terakihi are a low productivity species, it is less resilient to high levels of fishing pressure than high productivity species. This makes the low abundance of East Coast terakihi of particular concern. Our organisation urges that this sustainability risk is addressed in the strongest terms so that this stock is rebuilt at the earliest opportunity.

In order to ensure the rebuild of East Coast tarakihi, SPCA recommends selection of Option 2 which results in the largest catch reductions to East Coast tarakihi, and therefore the fastest rate of rebuild. Our organisation rejects the Industry Rebuild Plan as insufficient to deliver the required rate of rebuild and sustainability outcomes.

The Society welcomes the positive impact that a reduction in fishing and trawl effort on tarakihi will have on the bycatch of marine mammals, fish and sea birds which are all of significant concern due to commercial fishing methods and the use of sea nets.

Conclusion

SPCA appreciates the regular review of catch limits and other management controls for selected fish stocks and welcomes the aim of Fisheries New Zealand to ensure the sustainable utilisation of fisheries resources. However, the Society believes that more can be done to address declines in fish stocks where these are experienced by utilising the biggest reductions in catch limits for these species. Such changes are necessary to allow for the regeneration of the fish stocks and to ensure a sustainable future. SPCA is concerned about any plans to utilise low or slow-recovering fish stocks and strongly advocates against any decision to permit the use of, or increase, these fisheries resources until numbers are abundant.

The Society has significant concerns about the adverse impacts of human activities on the marine environment all around New Zealand and believes that commercial fishing methods should be overhauled to ensure that the adequate conservation and management of fish, aquatic life and seaweed across the country is prioritised over commercial profits. In particular, SPCA is against the use of bottom trawling and other devastating commercial fishing practices.

SPCA appreciates the opportunity to contribute to the Review of Sustainability Measures for 1 October 2019 and would welcome further engagement on this issue. If any further information is required, the Society is happy to discuss this matter further.

References

Andrew, N.L., Agatsuma, Y., Ballesteros, E., Bazhin, A.G., Creaser, E.P., Barnes, D.K.A., ... & Einarsson, S. (2002). Status and management of world sea urchin fisheries. Oceanography and marine biology, 40(40), 343-425.

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Victorero, L., Watling, L., Deng Palomares, M.L. & Nouvian, C. (2018). Out of sight, but within reach: A global history of bottom-trawled deep-sea fisheries from >400 m depth. Front. Mar. Sci. 5, 98.

From:	Russell Smart (CMDHB)
To:	FMSubmissions
Subject:	Kahawai and crayfish
Date:	Thursday, 11 July 2019 8:05:42 AM

Commercial netting in the Hauraki Gulf should be banned. Catching a kahawai has become a rare and prized event !
Crayfish stocks around Great Barrier Island are abysmally low. It is ridiculous to allow ongoing commercial (and recreational) potting .

Russell Smart

From: [redacted]
To: FMSubmissions
Subject: SUR 1A and 1B submission
Date: Wednesday, 24 July 2019 2:49:19 PM
Attachments: [redacted]submission Final.pdf
NIWA PROJECT SIL08302.pdf

To MPI Submissions,

Please find attached my submission regarding the SUR1A SUR1B TACC increase.

Regards

[redacted]
Sea Urchin New Zealand

"Kina Help You"

KINA

S.U.N.Z
Sea Urchin New Zealand

[redacted]

22nd July 2019

Sustainability Review 2019,
Fisheries New Zealand,
PO Box 2526, Wellington 6140

Submission on: Review of Sustainability Measures for Kina (SUR 1A, SUR 1B) for 2019/20

This is a submission from [redacted] on the above Review.

I have carefully read the Discussion Document - Discussion Paper No: 2019/1. I have also discussed the situation in SUR 1A and 1B with my colleagues, other fishers, local iwi and customers.

I support Option 3 in its entirety, including the settings for customary, recreational and other allowances.

The reasons why I support Option 3 are listed below:

1. Introduction.

My family and I, started the current industry from scratch in 1992. At that stage there was no kina processing up and running. We are currently the only registered export premises with RMP audits in NZ concentrating on Kina. Our pack house license ID is SUNZ2. Our Export License Permit ID is SUNZ1. We have dived for kina in SUR 1A and 1B since 1992. A provisional catch history was allocated from the 1990 - 1991 catch years, before we started.

When Kina entered the QMS in 2004, TACC allocation was determined on the previous 8 years' catch history (i.e. 1996 -2003). That catch history was nearly 100 % based on our efforts over those years. Currently we hold 72% of Quota Shares, and (normally) fish the 20% of iwi-held ACE. We therefore harvest over 92% of the fishery each year in SUR 1B and over 60% in SUR 1A.

2. Allocation history

[redacted] of the (then) Ministry of Fisheries (MFish) and I had extensive communication when the initial and final allocation papers were written in August 2003. I

requested that, based on catch experience and catch history, SUR 1B be at least 180 tonne. He recommended 160 tonne, and for some reason 140 tonne was allocated. Presumably this lower figure was arrived at arbitrarily as part of the "precautionary" management setting mentioned in the Discussion Document. I also commented that SUR 1A was an under-developed fishery, and should have a similar allocation to SUR 1B, because the available habitats and problems with developing kina barrens, that have now morphed into a common phenomenon. However, because there was under maximized catch history, MFish decided to apply the mantra that: *'In the absence of any scientific information, the minister must err on the side of caution'*.

It has since been established by industry that SUR 1A is easily capable of the same TACC sustainable harvest as SUR 1B. This is evidenced by:

- Consistent harvest every year at the maximum level. No change in CPUE and it has almost certainly reached saturation-level.
- Few (if any) complaints about local depletion of kina stocks in SUR 1A, or 1B
- Ongoing and increasing problems with kina barrens in SUR 1A
- Quality of kina is declining in kina barren areas in SUR 1A.

A video showing the problem with kina barrens in New Zealand is available on

https://youtu.be/ybpHdLzWXqw

3. Specific comments on SUR 1A

This fishery was vastly under-allocated in the first place. We notice that the other harvester in this area, [redacted] concentrates his effort around the Hen and Chicken Islands. We also harvest there and have been astounded at the recovery of groomed areas in places like Boulder Bay, just east of Lady Alice Island. We have tried to rotate our harvesting efforts north of here to 'groom' areas. 'Grooming' consists of harvesting, leaving for 3+ years and then re-harvesting.

We have achieved effective grooming in most parts of the Cavalli Islands. There is no doubt that the quality of Kina in this area has improved due to our efforts. The colour and yields have significantly improved. Now we are not venturing any further than the established 'grooming areas' because doing so uses up ACE which is in seriously short supply (thanks to MFish's "cautious approach").

Of concern is that barrens are appearing in increasing numbers. e.g. Lion Rock north of the Bay of Islands. Pyramid Rock further north, and large parts of Doubtless Bay (Knuckle Point etc).

I submit that the SUR 1A fishery can easily support option 3 in a sustainable manner.

4. Specific comments on SUR 1B

This is our "home" fishing area. In SUR 1B, CPUE has flat-lined since 1998. This is entirely due to our fishing effort, as we are virtually the only commercial kina harvesters working this area.

We had a catch target of 600kg/diver /day in 1994. We still have the same expectation in 2019. In other words, CPUE hasn't changed at all in the last 25 years. It has reached saturation. When kina was introduced into QMS in 2004, there was a reduction in the catch

because we were limited to 140 tonne. This limited our divers, but CPUE and the total catch have been consistent since 2004 at 140 Tonne/yr.

A 50% increase is warranted, and we are quite happy to a review this after 2 years if the CPUE drops or electronic position reporting indicates problems with local depletion. As evidenced by overseas journal articles (e.g. James et al. 2016 – copy available on request), catch-position data is relevant to the management of sea urchin stocks throughout the world. Electronic catch-position reporting will provide the fishery with much more accurate information in a more timely manner. Any CPUE trends can be addressed immediately, including local depletion issues.

5. Kina Barrens

The biggest current problem with the Kina fishery is the increase of Kina barrens. This is a natural phenomenon, but the precise cause/effect is not well known. The Discussion Document has not adequately highlighted this aspect of the kina fishery, and the role it plays in its management.

There is documented evidence that kina barrens are a problem and are appearing more regularly. This evidence can be found at:

http://taputeranga.org.nz/the-marine-life/invertebrates/sea-urchins-kina/

https://www.facebook.com/NewZealandGeographic/photos/a.399647764099/10156533886454100/?type=3

https://www.nzherald.co.nz/front-page-top-stories/news/article.cfm?c_id=698&objectid=11372552

Management of kina barrens can be a difficult task. For example, as pointed out above, see:

https://youtu.be/ybpHdLzWXqw

This video is at one of our 'groomed' sites. We tried to extend this groomed site this season, but the site was too big and extensive to make this possible with the limited amount of ACE available. Fortunately, we can nibble away at some barrens each Nov – Jan, but the recovery of viable roe is only about 5%. At other times of the season, recoveries as low as 2% make fishing this area uneconomic. When we do try to groom these areas, we have to take a hit on the ACE, but know that the size of our groomed area has been increased.

Kina quality in the groomed areas has unquestionably improved (see youtube video for evidence). The improved and more consistent quality of kina make selling into local and export markets easier. Note that these markets are principally to urban whanau in NZ and Australia. This "urban whanau" demand has grown, with the quality we can produce from our groomed areas being a selling point. When we harvest kina from virgin areas, we get complaints. Colour is often dark and quality is inferior. Some refunds are required to keep customer satisfaction and confidence with SUNZ.

6. Future management

ACE Shelving is always possible as a rapid response to stock sustainability problems which might arise from a 50% TACC increase, even though it is highly unlikely that such problems would occur in SUR 1A and 1B. Given that the Fisheries Act requires management to MSY or above, it is disingenuous for Fisheries NZ to recommend lower TACC's as some kind of "precautionary principal" when other management tools such as shelving are available.

Shelving is now a known management 'tool'. We are very conversant with shelving in the Paua fishery, and believe that it would be even easier to implement for SUR. This is because there are a far smaller number of commercial fishers, and we have developed links to other harvesters, especially customary harvesters. We intend to work more closely with iwi, as from the recent meeting we attended in Tauranga with Te Ohu Kaimoana and other iwi representatives. We wish to be transparent with other users of the resource about quality and abundance of kina during the season. Some customary areas have been identified, which we have voluntarily agreed to avoid. There is no indication from other harvesters that our activities have impinged on their ability to exercise their rights in any specific area. Despite this, anti-commercial fishing sentiments are to be expected from some people. We suggest that Fisheries NZ looks closely at the evidence provided by the anti-commercial fishing lobby, and assess its veracity against the evidence provided in this submission.

7. Research and Development

Over the last 15 years we have financed our share of 2 major projects:

1. $330,000 for a Kina onshore enhancement project. In conjunction with NIWA, [redacted] the scientist, we had 6 trial of 10 weeks each, on shore fattening. A scientific paper has been published and this is available on request if needed.

2. $160,000 for a Kina enhancement program (James and Herbert 2009). This project looked at the enhancement of kina through management of kina barrens by selective harvesting and translocating. The report is available on request.

Further funding for research and development can be increased proportionately to the increase in TACC's for SUR 1A and 1B. Accordingly, Option 3 is the most desirable Option for R&D purposes.

8. Other management controls

Underwater Breathing Apparatus (UBA) should be allowed as an added tool, for commercial harvest of kina in all Fisheries Management Areas. It makes divers safer from shark attacks. The only reason why UBA was banned for kina harvest was because of lazy regulators lumping commercial kina and paua diving together. Kina divers have to go deeper (10m) than paua divers (5m) because of the habitats they inhabit. There are no sustainability issues with kina divers using UBA, but grooming areas is much easier using UBA. It is also much more cost – effective to use UBA for kina harvest, thereby making the Industry as a whole stronger. Customary and recreational concerns about commercial harvest using UBA can be

managed through ongoing consultation between the Kina Industry Council and their representatives.

Yours faithfully

[redacted]

References:

Phil James &Peter Herbert 2009. Kina roe enhancement by translocation.

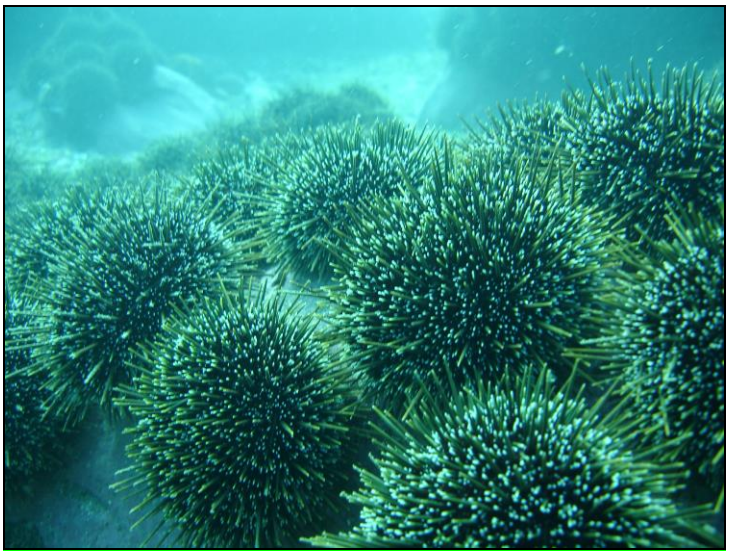
NIWA Client Report: WLG2009-7. February 2009.

Philip James, Chris Noble, Colin Hannon, Guðmundur Stefánsson, Guðrún Þórarinsdóttir, Roderick Sloane, Nikoline Ziemer and Janet Lochead. 2106. Sea urchin fisheries, management and policy review.

Sea urchin Fisheries management Project No.:11259. ISBN: 978-82-8296-378-7 (pdf)

NIWA
Taihoro Nukurangi

Kina roe enhancement by translocation



NIWA Client Report: WLG2009-7
February 2009

NIWA Project: SIL08302/1

Kina roe enhancement by translocation

Authors

Phil James
Peter Herbert

Prepared for

Seafood Innovations Ltd

NIWA Client Report: WLG2009-7
February 2009

NIWA Project: SIL08302/1

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Executive Summary

A kina translocation trial was undertaken in two areas in the Coromandel. The trial involved area transferring kina from an Initial Site where kina were abundant, had very low GI values and where there was very limited food to a Translocation Site. Historically, the kina found at the Translocation Site had very high GI values due to an ample supply of food. These kina were removed prior to the beginning of the trial. The transfer between sites occurred between 12 May and 3 June 2008 and the kina were left at the Translocation Sites for approximately 7 months until 10 December 2008. A census was conducted at the beginning of the trial to measure the GI values of the kina prior to being transferred and at the conclusion of the trial to measure the GI values of the kina that had been transferred as well as those that had remained at the Initial Sites.

The translocation of kina between sites appears to be relatively simple using the transporting protocol developed by SUNZ with minimal kina mortalities occurring.

The results of the trial showed significant increases in GI in the kina transferred to the Translocation Sites in both areas with higher GI values being recorded in Site One compared to Site Two. Surprisingly, there was an even greater increase in GI in the kina that remained at the Initial Sites in both areas compared to those that were translocated. The significant increase in GI in the kina that remained at the Initial Sites that traditionally provide poor quality roe is likely to be due to the reduction in animal density at these sites and the subsequent re-growth of algal species providing an abundant source of food. It is possible that changes in the environment such as exposure to greater amounts of swell may account for the poorer performance of kina transferred to the Translocation Sites compared to those which remained at the Initial Sites. Site selection is obviously critical for any future translocation ventures.

The 'increase in GI' measured during the trial ranged between 2.8% and 5.5% (equates to 28 and 55kg/tonne of greenweight kina). The GI of kina fished in the Coromandel area range in value from 1.2 – 13.0%. Below a GI of 6% it is not economic to fish the kina in this area. Therefore, increases in GI of between 28 and 55 kg/tonne of greenweight kina are economically significant as they may increase the yield of the animals by approximately 50-100%.

In summary the translocation of kina from areas of low to high food availability achieved significant increases in GI values at both the Initial and Translocation Sites. The significantly larger increases in GI in the kina that remained at the Initial Sites compared to those at the Translocation Sites was surprising and indicates that site selection is a critical factor when kina are translocated between sites as changes in environmental conditions (such as sudden exposure to large swells) may reduce the ability of kina to increase their GI values to their maximum potential.

1. Introduction

1.1 General

There has been considerable research on the potential of roe enhancement of kina (*Evechinus chloroticus*) in New Zealand and overseas. This research has focused on collecting animals from wild populations and holding them in land or sea-based holding facilities for limited periods (10-12 weeks) during which time they are fed artificial or natural algae diets. In New Zealand commercial roe enhancement trials have led to significant increases in GI in 10 week periods. However, it is still not clear whether roe enhancement will be commercially viable due to the high cost of feeding and maintenance of animals in both land and sea-based holding systems.

1.2. Sea Urchin New Zealand

Sea Urchin New Zealand (SUNZ) is operated and owned by Peter Herbert who has 20 years commercial kina and paua diving experience. Sea Urchin New Zealand kina landings peaked at 206tonne/yr and the company has developed processing and pottling techniques that meet international export standards and are now been used by a number of other processors in New Zealand. SUNZ was the primary commercial partner in a Technology for Business Growth funded kina roe enhancement project investigating roe enhancement of kina held in land and sea-based holding systems.

1.3. Aim

The current project attempts to undertake kina roe enhancement without any of the associated costs of land or sea-based holding facilities. The aim is to enhance the roe of kina by transferring the animals from areas of low feed availability to areas of high food availability. This has never been attempted with kina (*Evechinus chloroticus*), nor is there any literature describing the translocation of any other sea urchin species either in New Zealand or overseas. The translocation trial was replicated in Two Areas with Initial Sites and Translocation Sites in each of the two areas. In order to be sure the results of the trial applied only to kina that had been translocated the animals that were present at the Translocation Sites prior to the trial were removed before the trial began. The results focus on the GI values and the 'increases in GI' values of the kina that were translocated as well as those that were left behind at their initial sites at much lower densities.

2. Methods

2.1 Kina collection and transfer

All kina collections were made using snorkel equipment (Fig. 1) from one of the two SUNZ boats ('L' and 'y-not') (Fig. 2a and 2b). The kina were collected in collection kits (mesh bags) commonly used by divers. The kina were either transferred, still in the collection kits, or in large sacks from one site to another. During the transfer they were covered with moist kelp (*E .pyrifera*) and felt cloth and constantly sprayed with seawater (Fig. 2b and 2c). This technique is commonly used by SUNZ to transport live kina and has been successfully used in previous land and sea-based roe enhancement trials. The kina were distributed at the Translocation Sites by simply swimming transect across the site whilst shaking the kina free from the sack or kit bag (Fig. 3a and b).

Figure 1. Herb from Sea Urchin New Zealand collecting kina at Flat Island during the final census on 10 Dec 2008.

Figure 2. **a) The two boats used ('L' and 'y-not') to make the kina collections, b) and c) the kina in both boats are covered with damp sacks for transfer between sites.**

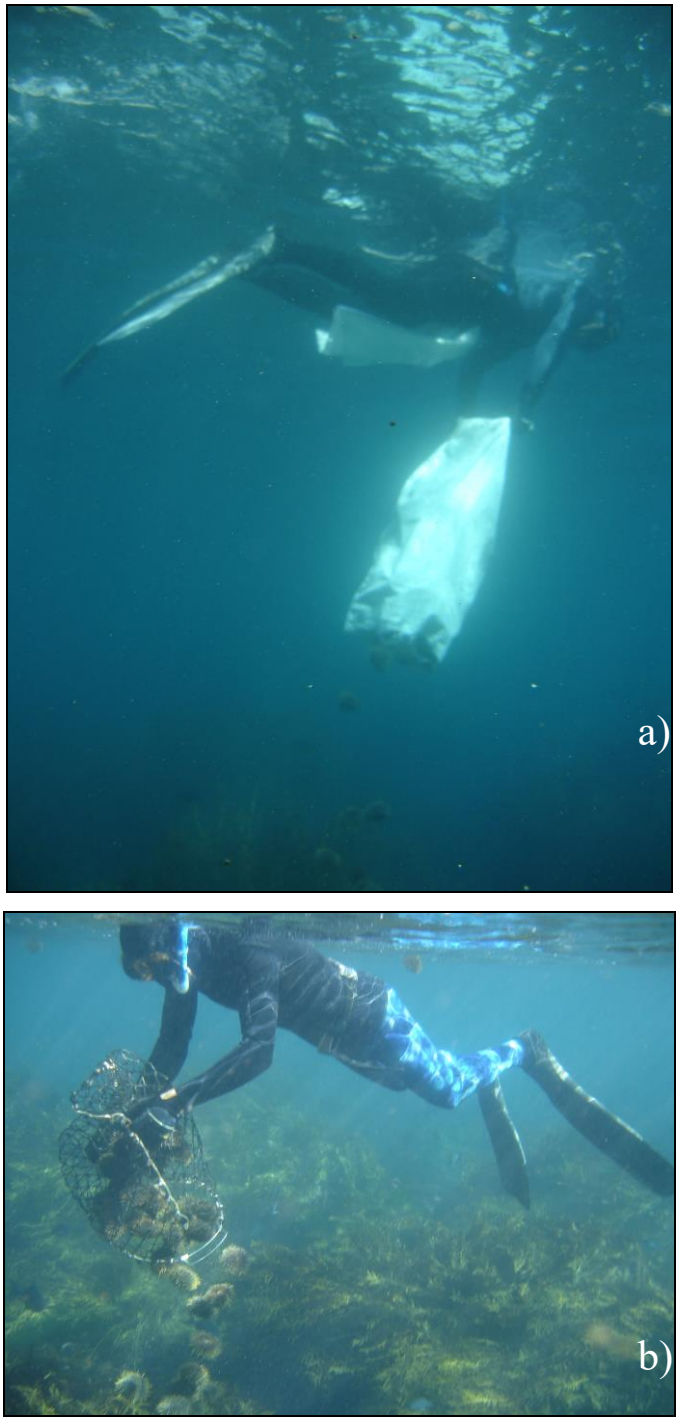

Figure 3. **A SUNZ diver emptying sacks of kina at the Translocation Site in a) Area One and b) Area Two.**

2.2 Areas One and Two

The two Areas and the Initial and Translocation Sites within each of the two Areas are located off the Coromandel Coast of the north east coast of the North Island of New Zealand (Fig. 4).

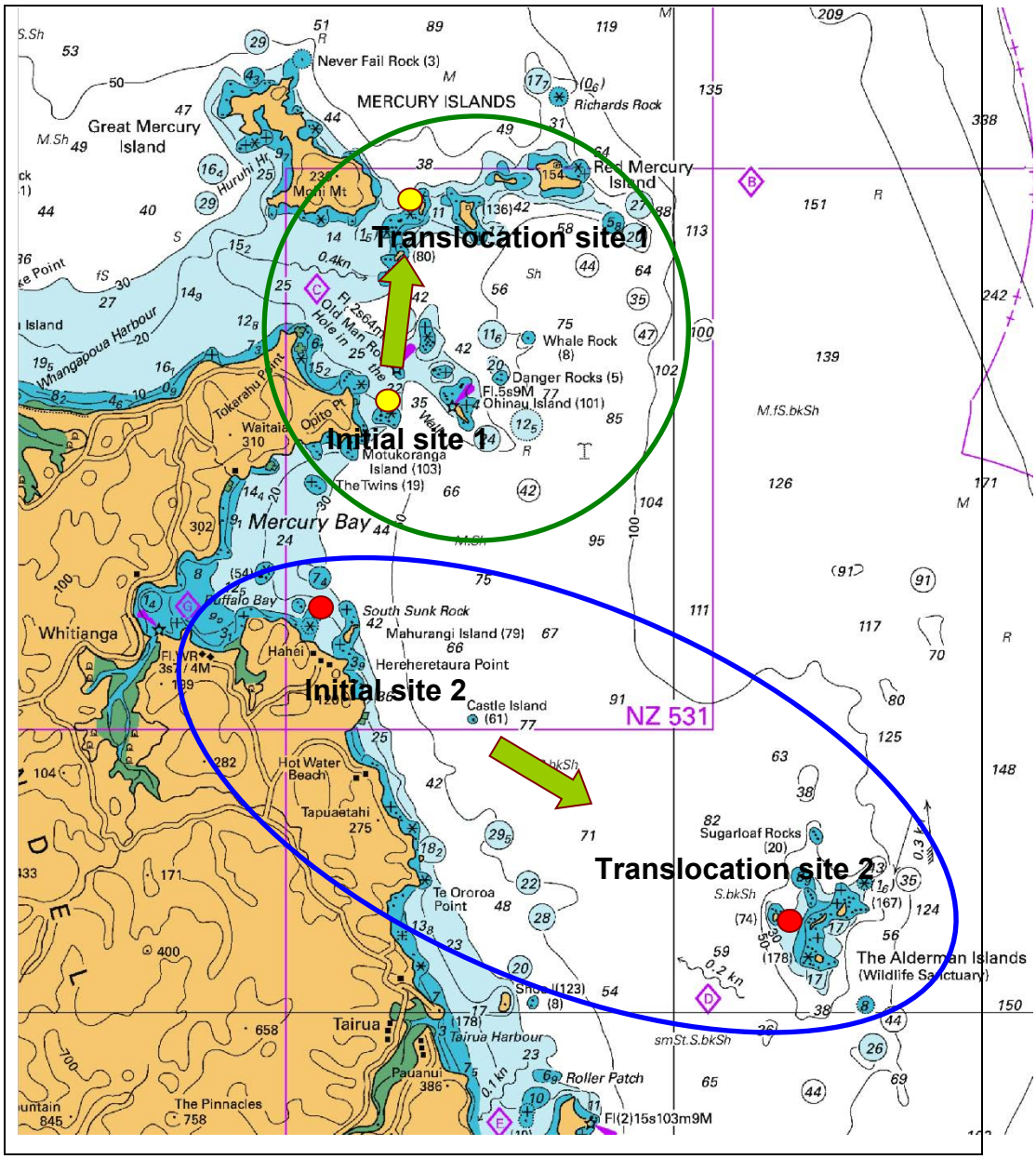

Figure 4. **The location of Area One (green border) and Area Two (blue border) and the Initial and Translocation Sites within each Area.**

2.3 Area One: Initial transfer

2.3.1 Initial collection - Site One:

The Initial collection Site in Area One was north of Needle Rock, also known as 'the Maori lady' (GPS location; 36° 43.768'S / 175° 50.190'E) (Fig. 5). This is a shallow site with a rocky shoreline. The kina were present at high densities and the substrate was primarily bare rock (Fig. 6) with occasional stands of algae. On 12 and 13 May 2008, 2.6t of kina were collected from the site and transferred to Translocation Site One. The initial GI of the kina was calculated in the SUNZ processing factory from a sample collected on 13 May 2008 (GI = 3.1 ± 0.1g). The GI was also calculated from a sample collected on 5 June 2008 and transported to the NIWA Mahanga Bay Research Facility in Wellington (GI = 5.6 ± 0.3).

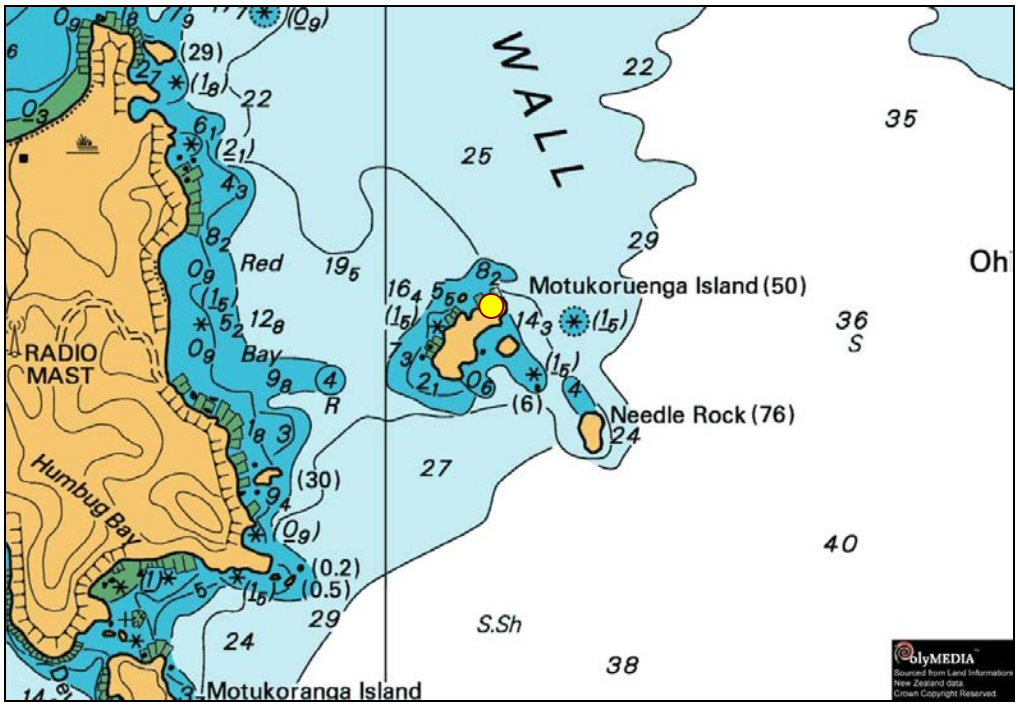

Figure 5. The location of the Initial Site in Area One (north end of Needle Rock).

Figure 6. The rock substrate and density of kina present at the Initial Site in Area One (north end of Needle Rock).

2.3.2. Translocation Site One:

The Translocation Site in Area One is situated along the northwest face of Middle Island, Mercury Islands (GPS location; 36º 38.261'S / 175º 51.540'E) (Fig. 7). The site is a shallow bay (approx. 150m across) with a rocky shoreline and the water depth varied from 1.5 - 3.5m. There was an abundance of algae at the site with heavy beds of *Ecklonia* and a mixture of other algal species.

On April 12 2008 all of the kina that could be found at the site were removed prior to the transfer of kina from the Initial Site.

When the site was visited on 3 June (approx. 4 weeks after the transfer) the kina at the site had dispersed widely and had not formed aggregations and there did not appear to be any impact on the flora of the site resulting from the kina transfer.

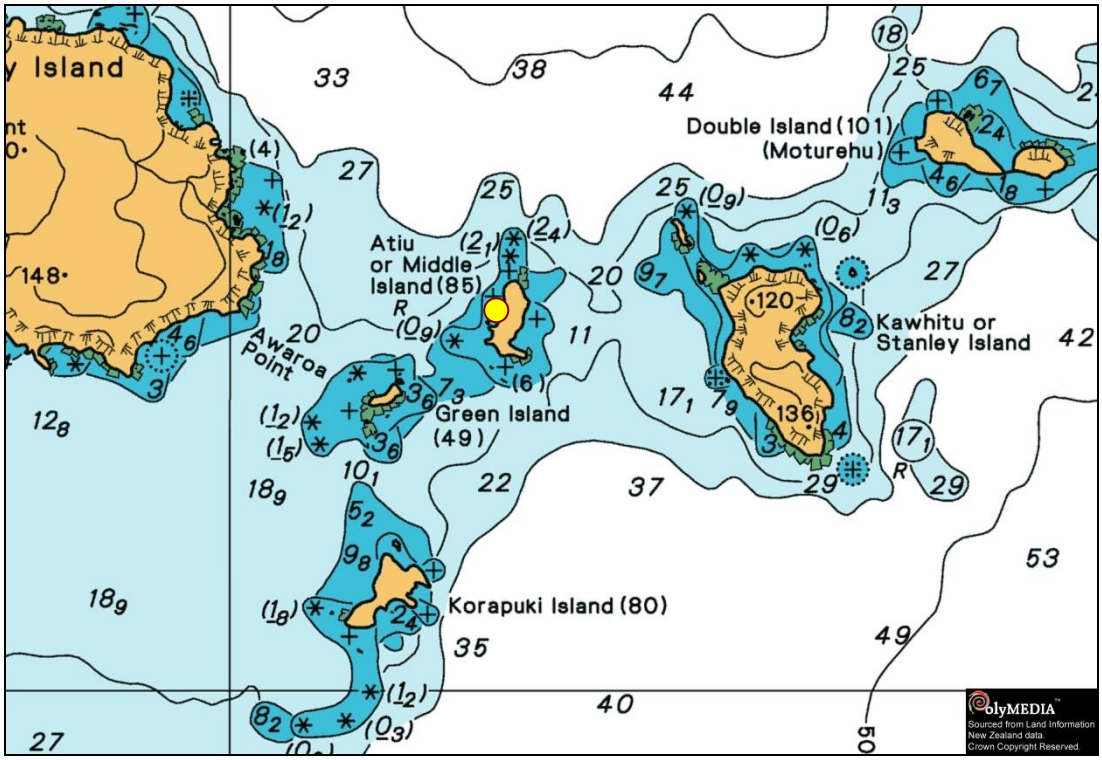

Figure 7. **The location (marked by the yellow dot) of the Translocation Site in Area One (along the northwest face of Middle Island in the Mercury Islands).**

2.4. Area Two: Initial transfer

2.4.1. Initial collection - Site Two:

The Initial collection Site in Area Two was located at Wigmore Pass at northeast end of Heihei Beach (GPS location; 36° 50.282'S / 175° 48.932'E) (Fig. 8). This site consists of a shallow reef site situated approximately 500m offshore from the northeast end of Heihei beach. The kina were present at high densities and the substrate consisted primarily of bare white rock and occasional stands of algae from depths of 2-6m (Figs. 9a and 9b). On 1 June 2008 1.5t of kina were collected from the site and transferred to Translocation Site Two and on 3 June another 1.5t of kina were collected and transferred. The initial GI of the kina was calculated in the SUNZ processing factory from a sample of kina collected on 1 June (GI = 2.8 ± 0.1). The GI was also calculated from a sample collected on 3 June 2008 and transported to the NIWA Mahanga Bay Research Facility in Wellington (GI = 3.9 ± 0.2).

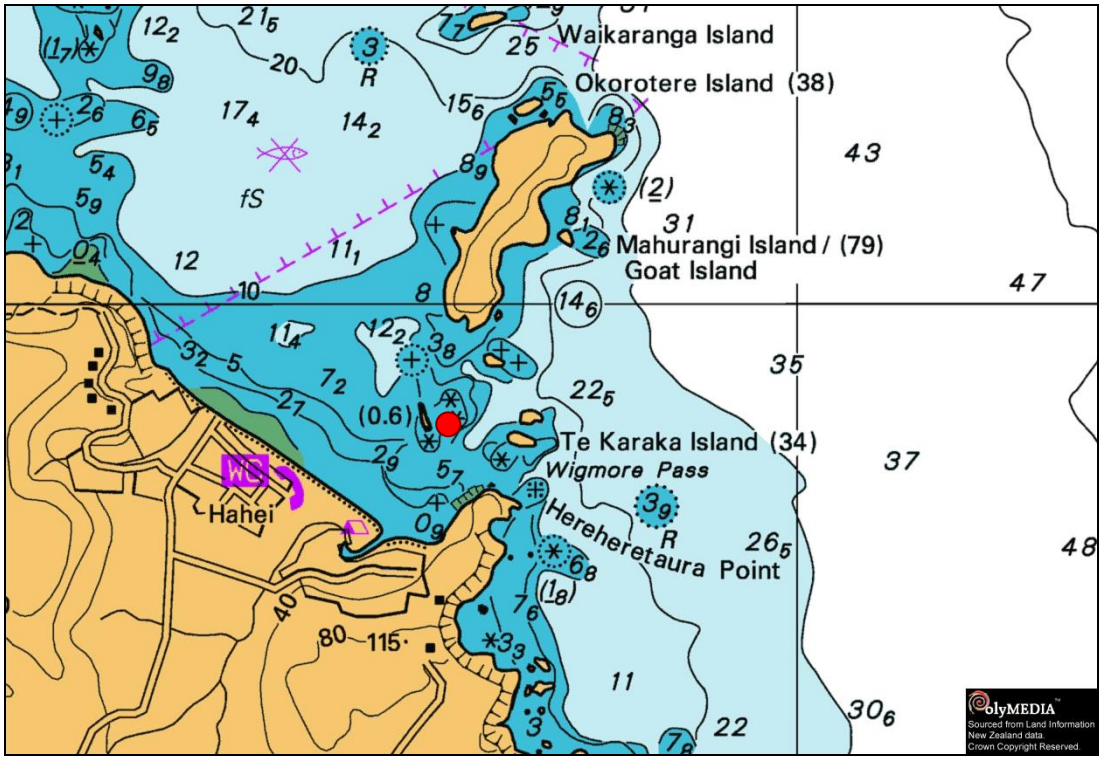

Figure 8. **The location of the Initial Site (marked by the red dot) in Area Two (Wigmore Pass at northeast end of Heihei Beach).**

2.4.1. Translocation Site Two:

The Translocation Site in Area Two is situated on northern side of Flat Island in the Alderman Islands (GPS location; 36º 57.225'S / 176º 03.400'E) (Fig. 10). The site consisted of a shallow bay (approx 200m across) with a rocky shoreline and the water depth varied from 2.0 - 5.0m. There was an abundance of algae at the site with heavy beds of *Ulva* and other low lying red and brown algae. There were also large stands of larger brown algae (*Carpophyllum*, *Lessonia* and *Ecklonia*).

Prior to the transfer on February 11 and February 28, 2008 all of the kina that could be found at the site and on the fringes of the site were removed. The kina had GI values of 5.1% at the former and 2.9% at the latter indicating that a spawning event had taken place between these collections.

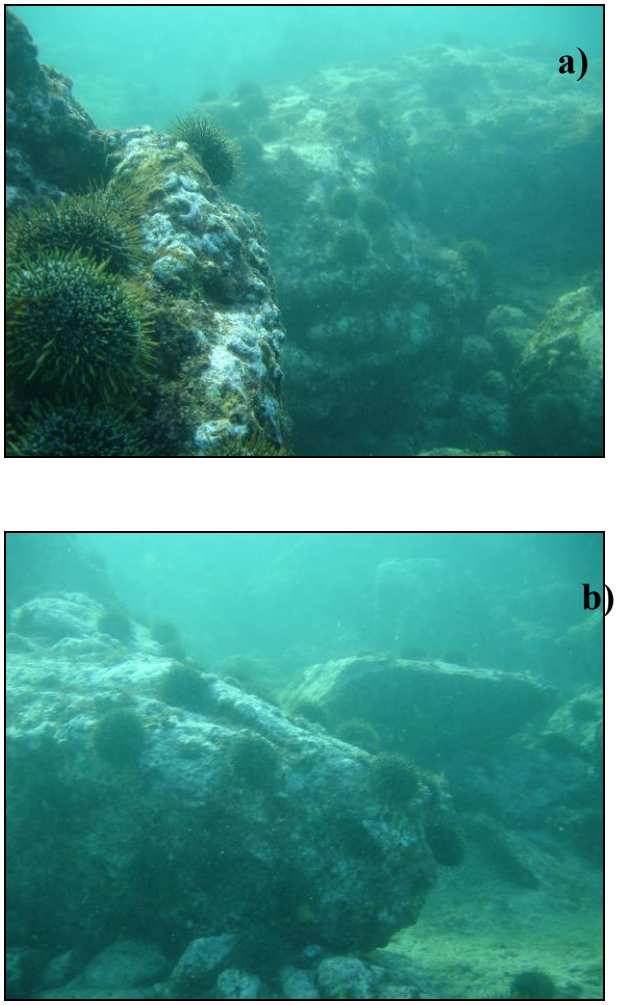

Figure 9. **The rock substrate and density a) and b) of kina present at the Initial Site in Area Two (Wigmore Pass at northeast end of Heihei Beach).**

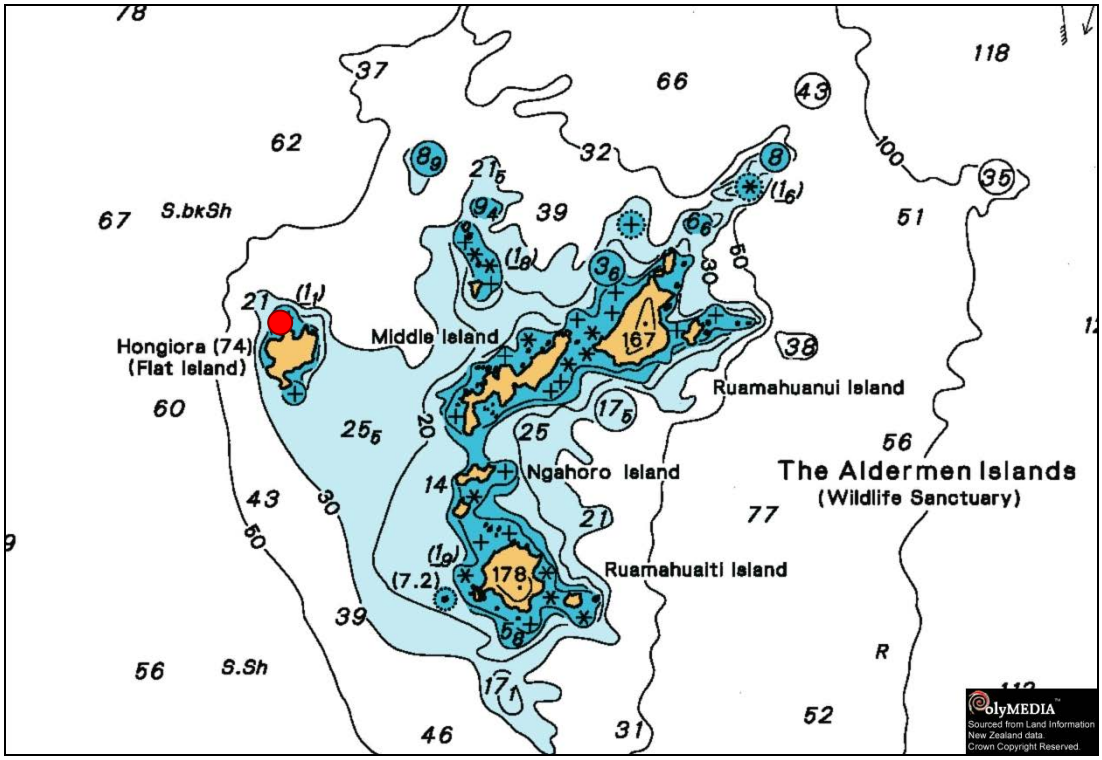

Figure 10. The location of the Translocation Site (marked by the red dot) in Area Two (northern side of Flat Island in the Alderman Islands).

2.5. Intermediate sampling

On September 14 a 111kg sample was collected from the Initial Site One (Wigmore Pass) and a 65kg sample was collected from Translocation Site Two (northern side of Flat Island in the Alderman Islands). Both samples were processed through the SUNZ factory and the GI for the sites were; 2.9 and 3.3% respectively. The initial aim of the trial was to take repeated samples throughout the trial. However, due to logistical and financial restraints it was decided that the focus should be on two areas, rather than one and the initial and final samples collected at these sites rather than a series of samples collected from a single site throughout the trial.

2.6. Final kina collection and census

On the 10 Dec 2008 30kg of kina were collected by divers, using snorkel apparatus as described in the Methodology Section, from each of the four sites (Initial Site) in Areas 1 & 2 and Translocation Sites in Areas 1 & 2 (see Figure 4). They were then landed at Flaxmill Bay, south of Whitianga and driven directly to the NIWA Aquaculture Facility at Mahanga Bay, Wellington (approximately 9hr drive time). On arrival at the facility the kina were placed into four large holding containers with

running ambient seawater and left overnight. The following day (11 Dec 2008) a census was conducted on 60 kina randomly selected from each of the four collection samples.

2.7 Assessment of kina roe

2.7.1 Processing (factory) technique

The initial and final gonad yield of the kina processed through the Sea Urchin New Zealand processing facility was calculated using the following formulae:

Gonad Index (%) = (Total weight of pottles) - (weight of pottle and kina liquor)/
(Greenweight of kina (sack weight)) x 100

This technique for measuring GI will be referred to as 'factory GI' in this report. The roe extracted by the processing facility was packed into pottles (e.g. 47kg of pottled roe = 216 x 200g pottles) and was distributed to retail outlets in Auckland for consumer assessment.

2.7.2. Standard technique

The following technique was used to assess the kina from the initial and final samples that were collected and transported to the NIWA aquaculture facility. Each animal was removed from the water and left in a drainage tray for a minimum of 5 minutes. Each kina was then weighed (greenweight) and the test diameter measured, the test was cracked and the gonad carefully removed and placed in a plastic weigh boat.

The condition (measured as gonad index or GI) of the urchins from each sampling site was based on four random samples of 15 urchins. Variables measured for each urchin were test diameter (mm), total wet weight (g) and gonad wet (unblotted) weight (g). These data were used to calculate the gonad index using the following formulae:

$$GI = 100 \times \text{gonad wet} / \text{total wet weight}$$

These data were also used to calculate the increase in gonad index from the difference between its GI at the conclusion of the trial and the mean GI for the corresponding population at the start of the experiment using the following formulae:

Increase in $GI = GI_{final} - GI_{initial}$ in units of kilo of roe / tonne of wet weight urchins

A one way ANOVA showed no significant differences between the experimental replicates. Subsequently these were pooled and a One-way ANOVA, followed by post-hoc Tukey-Kramer multiple comparison test was used to test for differences in GI (arcsine transformed data) and increase in GI between sample sites and the initial and final samples. All statistical tests were performed using the NCSS software package. This census technique is referred to as the 'standard assessment technique' in this report.

2.7.3. Comparison between factory and standard technique

Previous land-based roe enhancement trials have shown that there is a difference between the 'factory' and 'standard' assessment techniques with, the standard technique giving larger GI values. The average difference in the GI between the two techniques from previous trials was 1.2% and this should be taken into consideration when using the GI values calculated by the 'standard method' in any future economic analysis.

2.8. Seawater Temperatures

A stowaway Tidbit™ temperature logger (Onset Computer Corporation, Massachusetts, USA) was attached to a bottom weight and placed at each of the two sites in Areas One and Two. Each temperature logger recorded the ambient seawater temperature once every hour for the duration of the trial.

3. Results

3.1. Seawater temperatures

The two temperature loggers placed at the Initial and Collection Site in Area One were removed, or moved during the trial and were not able to be found and retrieved at the conclusion of the trial. The temperatures recorded at the Initial and Translocation Sites in Area Two are shown in Figure 11.

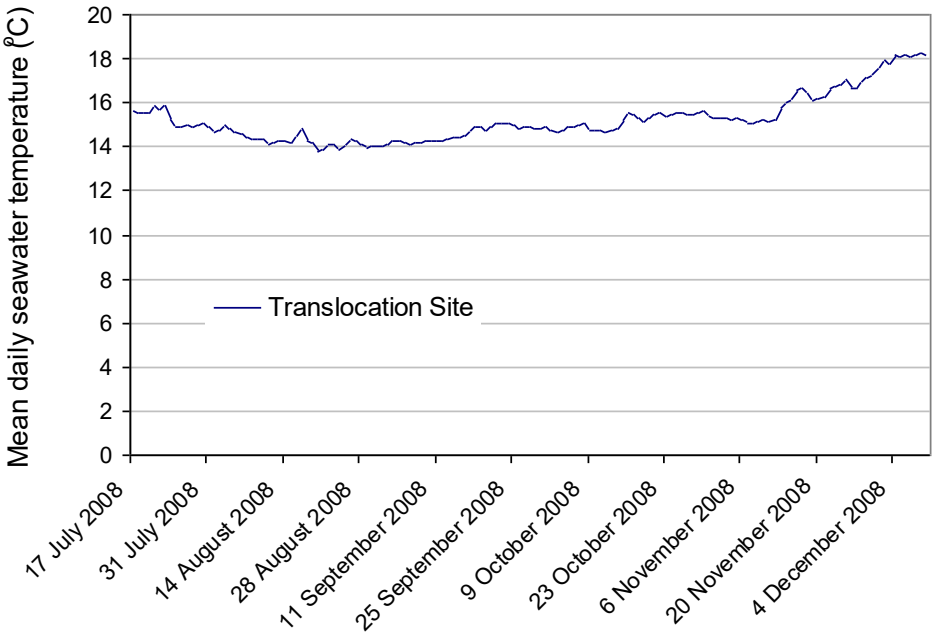

Figure 11. **The mean daily seawater temperatures recorded at the Translocation Site in Area Two during the trial.**

3.2. Gonad weight and test diameter

The mean gonad weight and test diameter of the kina collected from each of the collection sites is shown in Table 1.

Table 1. **The mean (±1 SE) gonad weight (g) and test diameter (mm) of the kina collected from each of the collection sites at the conclusion of the trial.**

Collection Site	Wet Weight (g)	Test diameter (mm)
Initial collection Site One – Maori Lady	76.9 (0.6)	193.0 (4.5)
Translocation Site One – Middle Island	76.3 (0.8)	188.3 (5.8)
Initial collection Site Two – Wigmore Pass	73.0 (0.5)	163.9 (2.9)
Translocation Site Two – Flat Island	73.8 (0.5)	168.0 (3.4)

3.3. Gonad Index

Kina collected from Area One had a significantly larger GI value at the beginning of the trial than those collected from Area Two (One way ANOVA: F = 6.86, df = 1, 240, $P < 0.05$) (Figure 12a).There was a significant increase in GI between kina collected at the beginning and conclusion of the trial in both Area One (One way ANOVA: F = 86.9, df = 1, 180, $P < 0.05$) and Two (One way ANOVA: F = 195.6, df = 1, 180, $P < 0.05$) (Figure 12a and b). There was also a significant difference between the GI of kina sampled at the conclusion of the trial from the Initial and Translocation Sites from the two Areas (One way ANOVA: F = 14.4, df = 3, 240, $P < 0.05$). Post hoc Tukey-Kramer Tests showed that there was no difference in the GI of the kina collected from the Two Initial sites or from the two Translocation Sites at the conclusion of the trial. However, the kina at the Initial Sites in both Area One and Two had significantly higher GI values than those at the Translocation Sites (Figure 12a and b).

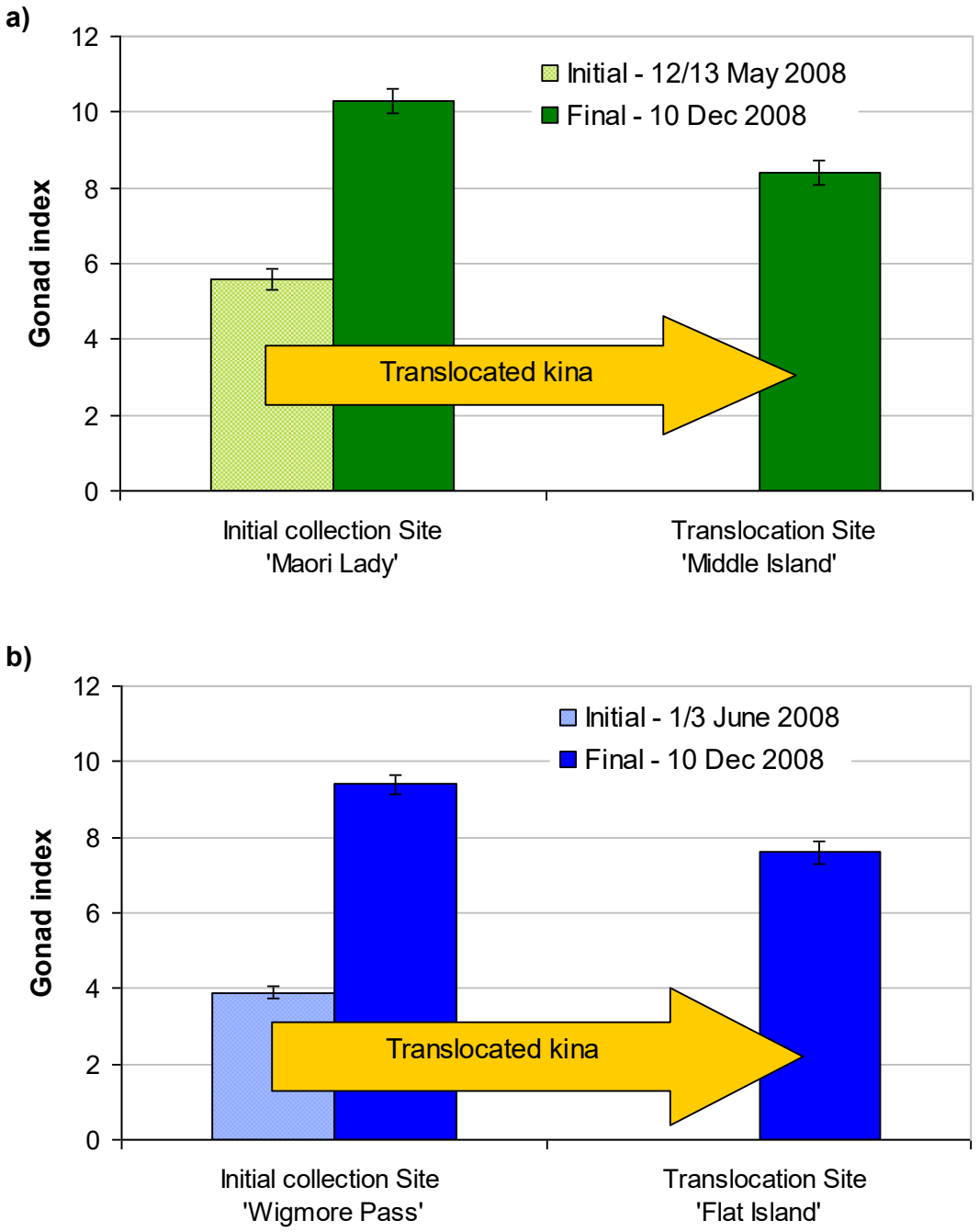

Figure 12. **The GI (±1 SE) values of kina collected from a) Area One (green) and b) Area Two (Blue). Kina were collected from the Initial Sites at the beginning (light coloured bars) and conclusion (dark coloured bars) of the trial and from the Translocation Sites at the conclusion of the trial.**

3.4. Increase in roe yield

There were significant differences (One way ANOVA: F = 14.4, df = 3, 240, $P < 0.05$) in the 'increase in GI' of the kina from each of the four sampling sites at the conclusion of the trial (Figure 13). The kina left at the Initial Site in Area One (Wigmore Pass) had the greatest increase in GI (5.5 ± 0.3) but there was no significant difference between the GI increase for these kina and those from the Initial Site in Area Two (Maori Lady) (4.7 ± 0.3). Both Initial Sites had significantly greater increases in GI than kina from their respective Translocation Sites (Area One - Middle Island 2.8 ± 0.3 and Area Two – Flat Island 3.7 ± 0.3). There was no significant difference in the 'Increase in GI' of kina from the Translocation Site in Area One (Middle Island) and the Translocation Site in Area Two (Flat Island) (Fig. 13).

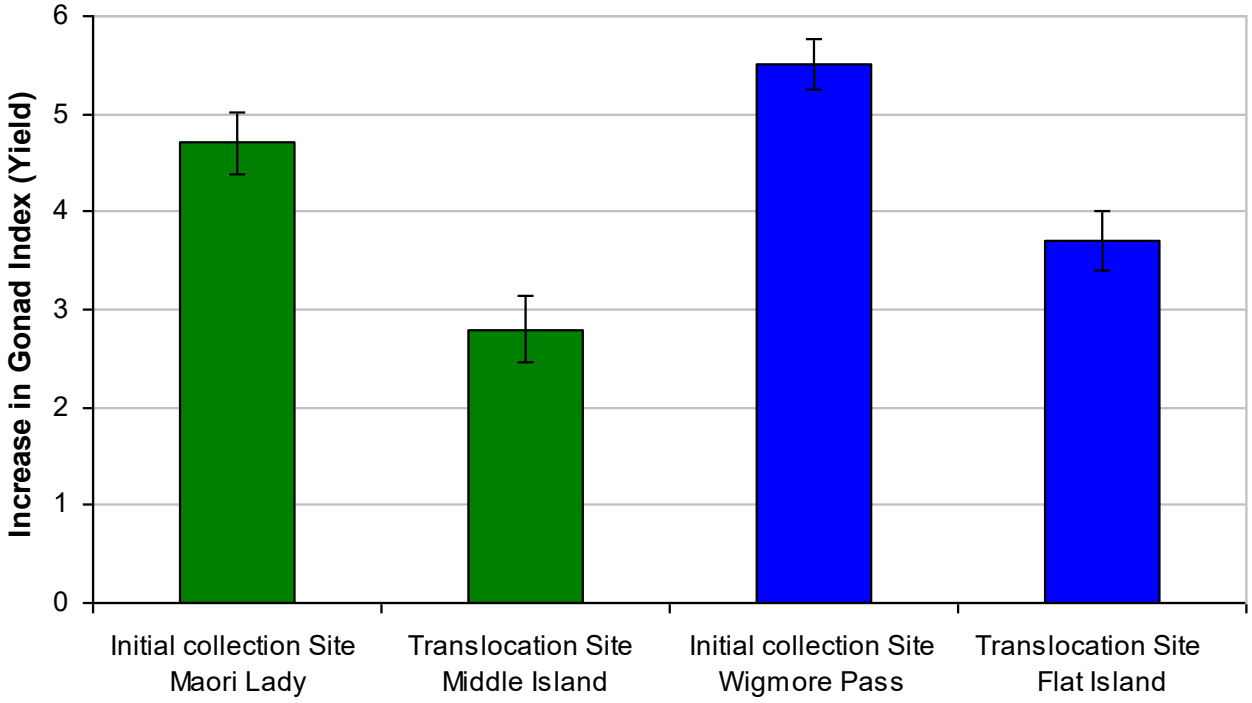

Figure 13. The mean increase in GI (±1 SE), or yield, from the Initial and Translocation Sites in Area One (green) and Area Two (blue) at the conclusion of the trial (10 Dec 2008).

3.5. Roe quality

The roe taken from the kina collected at the conclusion of the trial was processed and sold on the domestic market as a market test for quality acceptability. The roe from all of the sites was accepted by customers as high quality east coast, North Island roe which has a retail value between 85-95$/kilo at the time this report is produced.

3.6. Site observations

3.6.1. Algal re-growth

At the beginning of the trial the Initial Sites in both Area One and Two were barren of any algae with high densities of kina present (Figure 14a). At the conclusion of the trial there was a noticeable increase in the algal cover at both of the Initial Sites (See Figure 14b). This is most likely a result of the reduction in kina density at the site and the subsequent reduction in algae biomass being consumed.

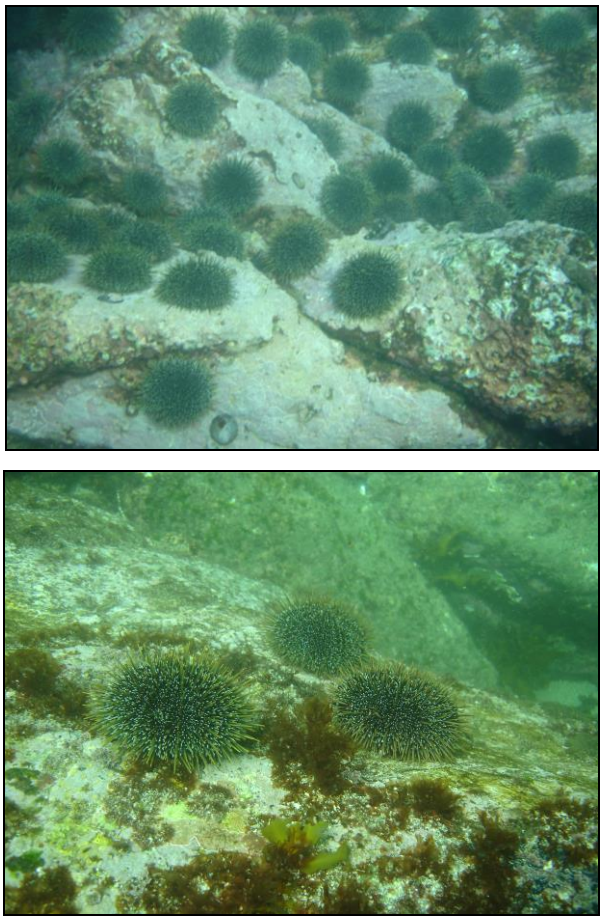

Figure 14. The Initial Site in Area Two at the beginning of the trial a) and at the conclusion of the trial b). Note the re-growth of algae on the rock surface at the conclusion of the trial.

3.6.2. Kina distribution

At the conclusion of the trial the kina that were transferred to the Translocation Site in Area One were evenly spread out across the relatively simple bottom terrain of the site (Fig. 15). However, the kina that were transferred to the Translocation Site in Area Two were found aggregated in small groups in the complex bottom terrain of the site (Fig. 16).

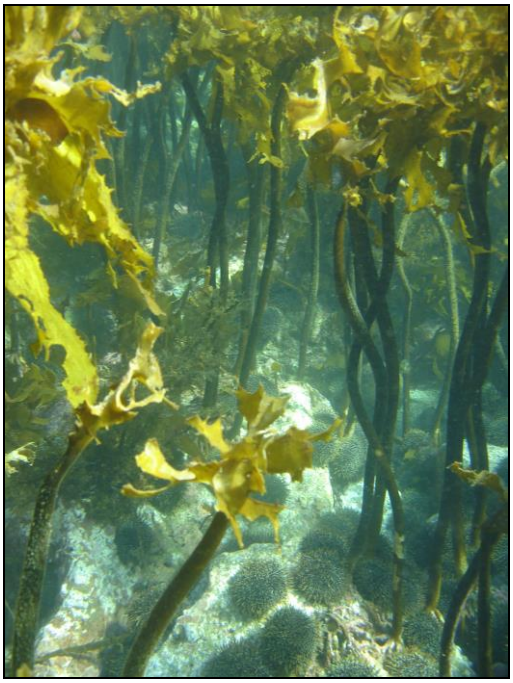

Figure 15. Kina transferred to the Translocation Site in Area One at the conclusion of the trial. The kina are evenly distributed throughout the Ecklonia plants and are easily found and collected.

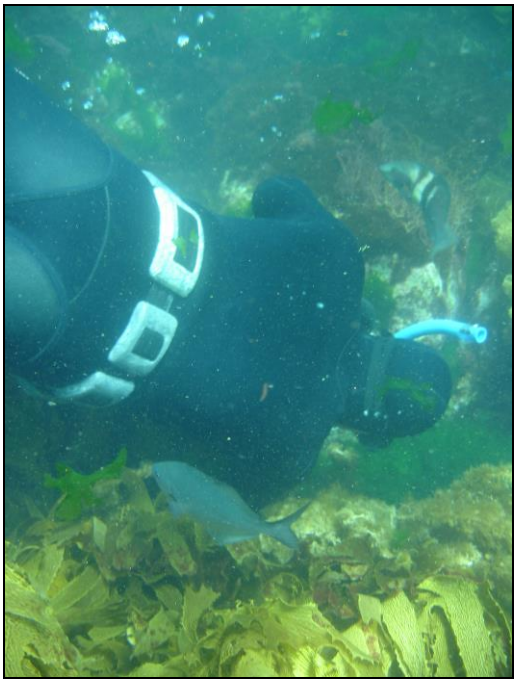

Figure 16. Diver collecting kina transferred to the Translocation Site in Area Two at the conclusion of the trial. The kina are not visible as they are in a relatively small group surrounded by algae in a complex bottom terrain.

4. Discussion

4.1. General

The aim of the project was to undertake a proof of concept kina translocation trial. This involved taking poor quality kina that were abundant and easily accessible (but not of high enough quality to be economic to fish) and transferring them into areas where there was a high abundance of natural feed and where there was a history of good quality kina being present.

4.2. Survival

Previous results have shown that by avoiding direct sunlight and wind on animals that have been removed from the water mortality rates are minimal (< 1%). The results of this trial indicate that the transfer of kina from one area to another is highly successful using the SUNZ transportation protocol (as described in methodology). This method has been developed over a number of years and in previous trials kina was successfully transferred from Whitianga to Wellington (approximately 11hrs travel time). Although mortality could not be specifically measured in the current trial there

was no indication of mortality (e.g. empty tests) at any of the translocation sites and no floating kina immediately following translocation.

4.3. Increase in GI

4.3.1. Area One and Two Combined

The results were the same for both Area One and Area Two with kina that remained behind at the Initial Site (at much lower densities than prior to removal of the kina for translocation) having significantly higher increases in yield (4.7% and 5.5% which equates to 47 and 55kg/tonne of greenweight kina from Areas One and Two respectively) than those that were transferred to the Translocation Sites (28 and 37kg/tonne of greenweight kina from Areas One and Two respectively). These results indicate that the advantages of kina translocation are twofold.

Firstly there is a significant increase in GI in the kina that remained at the initial sites that traditionally provide poor quality roe. This is likely to be due to the reduction in animal density at these sites and the subsequent re-growth of algal species providing an abundant source of food. The GI of kina fished in the Coromandel area range in value from 1.2 – 13.0%. Below a GI of 6% it is not economic to fish the kina in this area. Therefore, increases in GI of 4.7% and 5.5% (or 47 and 55kg/tonne of greenweight kina) are economically significant as they may increase the yield of the animals by almost 100%.

Secondly, there was also a significant increase in GI in the kina that were transferred to areas that have historically provided good quality kina and had an abundant source of food (Translocation Sites). The increases in GI of 2.8% and 3.7% (or 28 and 37kg/tonne of greenweight kina) from Areas One and Two respectively were smaller than for animals that were not transferred but were still significant and are also economically important as they may still increase the yield of some kina in the area by approximately 50%. There are a number of possible reasons for the lower increases in GI at the Translocation Sites. Most animals have a negative reaction to stress. Although survival was very high following the transfer of the kina, the transfer process may still provide a very high level of stress on the animals. Although this may have a negative effect on the increase in GI following translocation, kina would be likely to recover from this stress relatively quickly (in a matter of weeks). Another reason could be that the conditions may be quite different at the Translocation Site compared to the Initial Site. For example the Translocation Site in Area Two was

exposed to large swell (waves) events on occasions (it was not possible to access some animals on the final collection day due to very strong surges) whilst the Initial Site at Wigmore Passage is relatively protected from swell. The kina may be adapted to the low swell conditions at the latter and may not cope well with a sudden transfer to areas of high swell. There is anecdotal evidence that the kina found in sites that are exposed to an easterly direction are small and generally found hidden in small crevices and holes. If the small size of these animals is due to an increase in stress from harsher environmental conditions this would support the findings of this trial where kina transferred to a more exposed site had lower GI values than those that remained in a more sheltered site.

The results of the trial have shown that Translocation Site selection is important. Not only was Translocation Site in Area Two (Flat Island) more exposed than at the Initial Site but the Site was large and had a complex bottom topography with many large boulders and crevices. The kina that were translocated there tended to cluster together in small groups but were still difficult to find as the small groups were widely dispersed across the site. In contrast the Translocation Site in Area One (Middle Island) was a protected, shallow, and was a relatively small site. The kina that were transferred there were evenly dispersed throughout the area and were easily found and collected at the conclusion of the trial.

The results indicate that kina translocation as a successful method of significantly increasing kina roe yield from wild populations, particularly in areas where there are large quantities of kina of very poor quality. However, to determine the economic viability of kina translocation a cost analysis should be undertaken to establish whether the increased returns are greater than the cost of transferring the kina. Prior to the establishment of large scale kina translocation there would also need to be some amendment of the legislation for collection and landing of kina. There should also be some study on the environmental impact of large scale translocation on both the Initial and the Translocation sites.

4.4. Conclusions

Increases in yield of approximately 50% can be achieved by transferring kina from areas of poor food availability, high density and poor roe quality to areas of high food availability and low kina density. Increases in yield of approximately 100% can be achieved by lowering the density of kina held in areas of poor food availability, high

density and poor roe quality to allow for the re-growth of algae at the site. It should be noted that the increase in GI may vary due to a wide range of factors and that greater or lower yields may be achieved at different sites at different times of the year and by using different populations of kina.

In summary the translocation of kina from areas of low to high food availability achieved significant increases in GI values at both the Initial and Translocation Sites. The significantly larger increases in GI in the kina that remained at the Initial Sites compared to those at the Translocation Sites was an unexpected and surprising outcome and indicates that site selection is a critical factor when kina are translocated between sites. The results also suggest that Translocation Sites should be easily accessible and not exposed to large swell events if possible.

4.5 Further research

Further research should include an economic viability study on kina translocation. This make take into account the average difference in the GI of 1.2% between GI values calculated using the 'factory method' (which is how wild kina are measured) and the 'standard method' used to calculate GI values for this report.

Further study on the impact of transferring kina on both the Initial and Translocations Sites should also be undertaken. Transferring kina from a range of Initial Sites to a single Translocation Site would determine the effects of using different wild populations on kina translocation. Transferring kina from a single Initial Site to a range of Translocation Sites would determine the effects of various Translocation Site parameters on kina Translocation. In the latter it would be important to focus on the environmental impacts, particularly algal re-growth in areas where kina densities are lowered and the impact on algae at sites where kina are translocated. This could be tested by careful site selection (e.g. choosing two similar sites that are in close proximity but are clearly differentiated by sand and removing the kina from one of the two sites and monitoring the effects).

As a follow up to the current trial, Sea Urchin New Zealand will observe the kina (anecdotally and at their own cost) at both Translocation Sites and Initial Sites over the next 6-12 months to monitor the GI values of the kina. This will give some indication as too whether the trends observed in the study continue over time or whether further changes occur over longer time periods.

From: [redacted]
To: FMSubmissions
Subject: Sealord Group Ltd submission to FNZ Sustainability Review
Date: Thursday, 25 July 2019 12:34:47 PM
Attachments: image001.png
2019 Sealord Sustainability Review submission FINAL_.pdf

Kia Ora,

Please find attached submission to the Sustainability Review from Sealord Group Ltd.

The document includes submissions on proposed management measures for the following stocks: SKI3 & 7, HAK7, HOK1, LIN7, ORH3B, ORH7A, SWA3 & 4 and Tarakihi.
Sealord also includes submissions on the proposals to change the Deemed Value rates for JMA7 and BNS7.

Contact details for confirmation and feedback are below.

Regards

[redacted]

T: [redacted] | M: [redacted] E: [redacted]
149 Vickerman St / PO Box 11, Nelson 7010
New Zealand

Please consider the environment before printing this email

25 July 2019

Sustainability Review 2019
Fisheries New Zealand
Ministry for Primary Industries
PO Box 2526
Wellington 6140

BY EMAIL: FMSubmissions@mpi.govt.nz

Sealord Submission on Fisheries New Zealand Sustainability Review 2019

1. Kia ora and thank you for the opportunity to make a submission on the proposed TACC changes and deemed value rates for 1 October 2019.
2. Sealord is half owned by the Maori people of New Zealand, through Moana New Zealand (Aotearoa Fisheries Ltd), and half owned by global seafood company Nippon Suisan Kaisha, Ltd (Nissui).
3. One of the largest quota holders in New Zealand, Sealord manages all aspects of our deep-water operations from harvest to sale. Sealord operates eight deep water vessels in New Zealand waters. For more information on Sealord please refer to www.sealord.com.
4. The purchase of a new vessel by Sealord in 2018 endorses the confidence Sealord has had in the long-term future of the rights-based quota management system (QMS) in New Zealand.

Deepwater Stocks

HOK1

5. Sealord does not support either of the options listed by FNZ and proposes the following alternative:
    a. Sealord supports precautionary management of the HOK1 stock. Measures put in place by hoki quota holders for the 2018/19 season include catch reductions equivalent to option 3 from FNZ (20,000 GWT HOK1W shelved and over 9,000 GWT unfishable during the spawn closures). In addition to overall catch reductions, during the 2018/2019 season, Industry tightened restrictions around the hoki management areas (HMAs), instituted mandatory move-on procedures for juvenile hoki encounters and implemented temporary area closures to ensure uninterrupted spawning in all four major hoki spawning areas, all of which provide a multi-layered approach to

sustainable harvesting. Sealord proposes that FNZ recognise industry-initiated catch reductions in place versus the use of a TACC reduction, which is a blunt instrument that will inhibit the ability of responsible managers to respond to the latest science and/or further changes in the fishery.

i. An analysis of catch and effort on the hoki spawn fisheries and VMS monitoring of vessel deployments in the 2018/19 season will verify that DWG can successfully apply industry lead sustainability measures; and

ii. Deepwater quota owners can respond to changes in the fishery faster through shelving arrangements than FNZ can mandate through TACC cuts. After recognising concerning signals from the WCSI spawn fishery in 2017/18 and agreeing to shelve ACE, fishing companies were able to reallocate fishing effort for the improvement of the fishery.

6. Sealord recognise that changes in the Western hoki fishery are evident but note that the causes for the change are unknown. The WCSI fishery is from a migratory population and it is unknown whether lower catches in recent years reflect lower stock numbers or a low migrating proportion. Weather, oceanographic variability and highly variable year class strengths (likely a combination of factors) can adequately explain seasonal catch variability. It would be imprudent to assume simple cause and effect, hence the precautionary measures implemented by quota holders.

   a. The fishery indepent data for the western stock shows a decline in WCSI spawning biomass since 2014 and stable relative biomass from the NIWA Sub-Antarctic trawl survey over the same period. Similarly, in the eastern stock the Cook Strait acoustic survey has measured a decrease in the spawning biomass while the biomass of the resident population on Chatham Rise has been steadily increasing. From these data we can be certain that there are changes occurring in the spawn fisheries, but it does not follow that the fishery is in decline or that a quota reduction is the best management tool.

   b. The climate is changing and affecting water temperatures; the range of a fish stock is highly temperature dependent. For example, snapper and kingfish are known to be moving south. It is also known that the West Coast is not the only spawning site for the western hoki stock, spawning hoki were caught by Sealord on the Snares Shelf in 2018.

   c. High juvenile numbers in the nursery areas on the Chatham Rise and strong recent year classes suggest a resilience in the fishery; responsive and adaptive measures are recommended over rigid quota cuts.

7. Sealord supports the approach recommended by DWG; a continuation of the 20,000 MT industry shelving of the western stock. Sealord would also support additional shelving post the FY19 WCSI hoki season, if

there is a continuing decline in catch rates.

8. Sealord would also note that FY19 total catch on the West versus the current sub area TACC will be a poor indicator of the health of the fishery as both Sealord and Sanford have redirected effort away from the WCSI over and above what the shelved ACE represents so total catch will likely be down further than the current 70,000 tonne sub limit in the West. Effort changes from Sealord include:
    a. Fishing the FV Tokatu in Tasmania;
    b. Redirecting the FV Rehua to orange roughy fishing rather than hoki; and
    c. Saving East hoki ACE by fishing alternative specie earlier in the year (e.g. squid) thus having East hoki ACE to fish at a time where normally Sealord vessels would be on the West. Sealord would note that Sanford appear to have taken similar steps in this regard.
9. Whilst any further industry shelving would be post the submission closing, it would be agreed prior to any decision needing to be made by the Minister so he will be able to take this into account in his decision making.

LIN7

10. Sealord supports option 2 proposed by FNZ for a 20% increase in the TACC from 3,080 to 3,696 MT. The fishery is in strong health and the LIN7 fishery is caught as bycatch in the WCSI hoki fishery thus effort and catch are unlikely to increase as a result of this proposal.

HAK7

11. Sealord agrees with option 1 from FNZ; a proposed reduction to 3,163 MT.

ORH7A

12. Sealord supports option 2 proposed by FNZ for an increase in the TACC to 2,060 MT.
13. Analysis of Sealord catch and effort and feedback from skippers is in line with the science presented for the ORH7A stock assessment. It is evident that the stock is well above management targets and increasing, and likely can support an increase in the level of catch. Sealord does however remain cautious in regards management of this long-lived specie and supports a conservative approach to increasing the TACC for ORH7A.
14. The ORH7A (Challenger) fishery is data rich for stock structure and abundance and is rightly celebrated as a success in manging an orange roughy stock rebuild. There are several interlinked sub-populations in the Challenger area and fish are known to migrate between them, this is further complicated by the portion of

the fishery outside the EEZ. The Sealord position is that a degree of caution is recommended to assess increasing catch rate affecting spacial distribution of the sub-populations.

ORH3B

15. Sealord supports the FNZ intention to increase the ORH3B TACC as per the 2018 proposal for staged annual increase of 11%.

SKI3 & 7

16. Sealord supports SKI3 and SKI7 TACC increases proposed by FNZ from 300 up to 600 MT; option 2 for SKI3 and option 1 for SKI7.
17. Both gemfish stocks are caught as bycatch in other fisheries, in the last few years they have become abundant to the point of inhibiting fishing operations as fishers attempted to avoid SKI. It is not envisaged that this increase in TACC will result in an increase of either catch or effort.

SWA3 & 4

18. Sealord supports the submission by DWG that both these fisheries need to be addressed urgently by the minister given current biomass indications and impacts on deepwater fishers.

Inshore Stocks

TAR 1, 2, 3 and 7

19. Sealord supports the tarakihi management strategy 2018-2021 as prepared by Fisheries Inshore New Zealand and Southern Inshore Fisheries Management Company Limited to rebuild and maintain the biomass of the eastern Tarakihi fishery at or above the maximum sustainable yield. This option provides management and research measures to assist the recovery of the eastern tarakihi fish stocks.

Review of Demed Value Rates

20. Reviewing deemed values rates within a structured policy framework does not address the anomalies commercial fisher's face from mixed species fisheries, interannual variability in distribution and abundance,

and climate change. The stated purpose of the deemed value framework is to encourage fishers to balance catch with ACE. Sealord views the practice of increasing deemed value after a single year excess or failing to recognise increasing relative abundance in a mixed fishery as incorrect applications of the framework that are not intended to lead to behavioural change. Sealord does not support the proposed deemed value adjustments for JMA7 and BNS7.

JMA7

21. JMA is a low value high volume fishery usually caught at 100% of ACE (+/- 5%); over the last 5 years total catches have been 99.7% of total ACE. There has not been a stock assessment plenary since 2009 and there is no suggestion that this is anything but a fishery in good health. Sealord CPUE has been steadily increasing since 2012, catch per vessel per day has increased by 50% over this period.
22. Because of the low value, JMA and associated pelagic species are targeted when other, higher value, fisheries are unavailable; typically, over the summer months before the squid season. Right at the end of the quota year the Challenger pelagics again become the focus, especially in poor WCSI hoki seasons like the last two years. Skippers targeting FRO7, EMA7 and BAR7 can encounter JMA7, the marks on the sounders are similar and their focus is on avoiding kingfish and snapper.
23. The one year where there has been an above normal catch versus the TACC was the result of one fishing company that has since amended fishing practises and it seems a peverse action to punish all JMA7 fishers as a result of this abnormality.
24. Sealord suggests that JMA catches in excess of ACE other than as referenced in para 23 are within normal annual variability and a result of increased relative abundance in a mixed fishery. Increasing the deemed value will not lead to changes in fishing behaviour. Sealord proposes that there be no change to the current JMA7 deemed value rate.

BNS7

25. Most of BNS7 is caught as bycatch in the WCSI hoki season fishery, it is caught at a very low proportion of target catch – but there is a lot of fishing effort in New Zealand's largest fishery. In fishing year 2017/18 Sealord vessels made 1,324 hoki target tows on the West Coast and encountered BNS on two of them.
26. In 2017 the BNS7 TACC was cut from 51 to 34 MT, the inshore line fishery was able to reduce BNS catch but even this strong incentive did not significantly reduce the deepwater BNS bycatch.
27. Bluenose on both coasts is undergoing a stock rebuilding programme; deepwater fishing vessels do not target BNS and they make every effort to avoid catching as bycatch. Sealord is investing in bluenose

behavioural research and fishing gear development to reduce BNS bycatch[1].

28. Sealord proposes that the BNS7 deemed value rates remain at current levels. Increasing the rate will not change fishing practice so the measure is only punitive. These funds are better spent by fishing companies on research and operational improvements to reduce BNS bycatch.

Yours sincerely

SEALORD GROUP LTD

[redacted]

[redacted]

[redacted]

Group Operations

Sealord

[1] Project # SIL 1814: Bluenose bycatch trawl innovation

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SOUTHERN INSHORE FISHERIES
MANAGEMENT COMPANY LIMITED

Sustainability Review 2019
Fisheries New Zealand
Ministry for Primary Industries
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Email: FMsubmissions@mpi.govt.nz

26 July 2019

Review of Sustainability Measures and Deemed Values for 1 October 2019

1. Thank you for this opportunity to comment on the review of sustainability measures for a number of fishstocks Southern Inshore hold a mandate for.

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. With our regional advocacy role for shareholders in the South Island we are appreciative of the reopening of a fisheries management unit at the Nelson MPI offices. This now provides us with more resourcing to focus on the management and review for many more of our South Island stocks.

5. The contact for this submission in the first instance is Carol Scott.

Lack of fishstock review and strategic approach

6. 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.

7. With around 670 fishstocks in the quota management system, something drastic has to happen within fisheries management to ensure that there is more timely reviews and responsive management to all our commercially and recreationally important and low knowledge fishstocks.

8. For 2019, Fisheries New Zealand (FNZ) have only proposed to review GUR7, SPO7, JDO7, SKI3, SKI7 and TAR3/TAR7E as representative Southern Inshore fishstocks. For the initial three stocks the

proposal is to review them under a multi-species fishery complex approach. This approach has no science-based assessment and has not been reviewed by any working group as a model to implement. Such an approach is apparently included under a new draft version of the inshore fisheries plan which has not been provided to industry for review or discussion on whether a regional method-based complex is the most suitable approach for fisheries management. The failure of this approach was evident given the number of stocks in the Top of the South region that were dropped from being reviewed. This trial restricted the review of any other South Island stocks.

9. In early 2019, Southern Inshore inadvertently discovered that FNZ were reviewing a list of 'possible' and 'probable' fishstocks which had been prioritised for 2019/20 without any dialogue with the CSO. This was a surprise and a disappointment given the efforts that Southern Inshore had gone to in analysing and presenting stocks for review within the process available including extensive supporting scientific and anecdotal rationale. FNZ received Southern Inshore proposals and decided to internally prioritise those stocks based on their resource capacity. Whilst that might be a reality there was no engagement with Industry to disclose that and no chance for Industry to participate in the prioritisation process.

10. It was therefore extremely frustrating to be presented with a proposal that was at polar opposites to what was initially discussed, and that contained no strategic fisheries management approach. The obvious outcome is that shareholders in Southern Inshore that have financially contributed towards presenting relevant species reviews, have been simply dismissed.

11. Southern Inshore accept that all the fishstocks FNZ have proposed need to be reviewed. However, the restriction on reviewing other fishstocks on the basis of trialling a multi-species complex (in one part of Southern Inshore's constituency) is inappropriate fisheries management and does not allow the full utilisation of fishstocks which in our opinion, contravenes the principles of the Fisheries Act. **We include the Southern Inshore proposal for all fishstocks requiring review as Appendix 1.**

12. Access to additional, sustainably managed ACE is the optimal outcome for fishers and improved revenue from the proposed TACC increases for quota-owners and fishermen within this area obviously supports the Government Growth Strategy and their desire to provide greater economic opportunity. However, we believe that the strategy has been ignored and is obviously not supported by the FNZ officials or Minister of Fisheries. If this were true then all effort would have been made to review more fishstocks this year.

13. A case in point is SNA7 which had a full stock assessment in 2018. FNZ failed to review the fishstock then and proposed that a review would follow a multi-sector forum. If that were to occur it should have been held prior to the consultation period last year to advise that review. FNZ have subsequently asked that the next stock assessment be brought forward from 2021 to 2020 and that industry should directly purchase the science as the project missed the fisheries research services for this year. Sadly, there is no guarantee that any new update off the back of improved recruitment and increased biomass would be reviewed. The decision has yet to be made to fund this work and given the lack of investment certainty is not surprising.

14. For this year, we believe that the 2018 stock assessment should have been used as the best available information along with the obvious increase in recruits and year class cohort from the 2019 West Coast South Island trawl survey. FNZ continue to fail at using information readily available for decision-making.

15. The industry is cost-recovered for research and management and should be provided with continued utilisation of stocks where the science provides those positive outcomes for a TACC review within that year. Similarly, stocks that are caught as a consequence of the East and West coast trawl surveys should have all been prioritised for review where information supported them.

16. 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. 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 want FNZ to show some leadership and courage and deliver some return on this long-term investment.

17. Southern Inshore and FINZ provided background information for a number of important stocks that are considered 'low knowledge' but are part of our multi-species fisheries. These stocks have been introduced into the QMS since its original 1986 establishment. Most of the stocks that fall within this category have been introduced based on FNZ's desire to manage ALL stocks within the QMS but to also fulfil their political obligations by ensuring that they provide for Maori under the Treaty settlement. Different rationale has applied over a couple of introduction phases and the subsequent outcome is that these stocks receive no priority in terms of management.

18. There has been no consideration given to the development opportunities, increased abundance, alternative catch mixes or changing fishing dynamics, and influences from environmental influences.

19. TACCs for these stocks have been set at nominal or low levels and in some instances significant levels of deemed value paid. Unfortunately, the opposite applies to RBY5 the setting of a TACC has been ignored yet again but FNZ is happy to adjust the deemed value to minimise that effect. This approach is incredulous when the opportunity to set a TACC this year has been ignored when clearly some factors are influencing its increased presence.

20. The low knowledge stocks could be further utilised and need to be addressed as a 'suite of species'. This could be done for all low knowledge stocks quickly and pragmatically without any significant science investment and would reduce a major economic impact on Industry. It is imperative that FNZ recognise and address the full multi-species nature of our fisheries and influences these stocks have on the target to bycatch complexes. Southern Inshore intend to work directly with local fisheries managers to review all our stocks to identify and rank them to ensure that all levels are reviewed.

21. Whilst there are some operational challenges and avoidance influencing these stocks, we believe FNZ have been overly cautious and are not looking at the long-term trends in these fisheries and the level of long-term sustained catch. Precautionary increases should have been made for these stocks along with management and monitoring plans.

Top of the South Island Trawl Fishery for 2019/20 – Paper No: 2019/14

22. This paper describes the fishstocks for review under a Top of the South Island trawl fishery complex with a two-year staged approach. Whilst it proposes to review GUR7, SPO7 and JDO7 in 2019 it fails to include ELE7 and SNA7 which are intrinsically mixed with this fishery and the remaining fisheries management area 7 (FMA7).

23. Taking this approach for review of fishstocks does not take into account the need to review further stocks on the WCSI as part of the FMA7 mixed species complex. This trial for a fishery complex completely disregarded any review of stocks in FMA3 and FMA5. The trial was apparently an outcome of the new inshore fisheries plan that is still in draft form. No-one in industry have seen or been consulted on the content. To restrict the review of stocks on the back of a fisheries plan that has not yet been adopted is inappropriate management. In fact it is not even management it is a continuation of the ad hoc process of FNZ.

Red gurnard 7 (GUR7)

24. We agree that GUR7 should be reviewed and that Option 3 is preferred based primarily on the results of the 2019 WCSI trawl survey. This reflects the continued increase of biomass on the WCSI and in Tasman/Golden Bays.

25. Increasing the TACC by 20% will allow increased utilisation at an acceptable level and reduce the potential for the payment of deemed value penalties. Such an increase is within the Southern Inshore principle of managing quota increases at an incremental level combined with continued monitoring and assessment.

26. GUR7 is a very important fishstock and whilst it is part of a multi-species mixed trawl fishery it should remain assessed separately instead of within a fishery complex until such a management framework is developed and accepted. Southern Inshore have proposed to review such an approach on a science-basis but this approach needs more discussion.

Rig 7 (SPO7)

27. We agree that SPO7 should be reviewed and that Option 3 is preferred on the basis of the results of the 2019 WCSI trawl survey, the recent Characterisation and CPUE update and the high-level and increasing biomass in this fishstock. Such an increase is within the Southern Inshore principle of managing quota increases at an incremental level combined with continued monitoring and assessment.

28. Increasing the TACC by 20% will allow increased utilisation in a fishery that has proven to be rebuilding at an increased rate and way. Whilst SPO7 is under Schedule 6 of the Fisheries Act and allows for the return to sea, increasing the TACC will allow for increased utilisation and not impose deemed values on fish that cannot be returned under this schedule. Within an environment where costs are continually rising from implementation of other fisheries management processes (ER/GPR etc), the ability to land more fish and enjoy economic return is paramount. To do nothing with the TACC in the event of increasing abundance and expecting fishermen to throw back fish is simply abhorrent.

29. SPO7 is taken as bycatch to the mixed trawl fishery throughout all of Area 7. It has been particularly prevalent as bycatch in the WCSI trawl fishery and therefore is not a good fit for the fishery complex model at a small-scale, regionally focused approach such as in the Tasman/Golden Bays.

John dory 7 (JDO7)

30. Option 2 does not provide the level of utilisation required in this fishery. We absolutely agree with an increase in TACC but it should have been at least to the level of 250 tonnes and not 230 tonnes.

31. JDO7 biomass remains high under the 2019 WCSI trawl survey. Although the coefficient of variance was 31.1% the biomass is not statistically different from the last survey in 2017, and still remains above the interim target biomass level.

32. JDO7 is taken principally as a bycatch species. It remains substantially higher than the HSS target limits, and has remained at these high levels for a number of years. It is clear from reports from fisherman that the stock has become more widespread and that there is a significantly broad range of sizes of fish within the fishery. Increased water temperature has been suggested as a possible cause for improved abundance and given the relationship with both Snapper and Kingfish abundance increases, is probably not surprising.

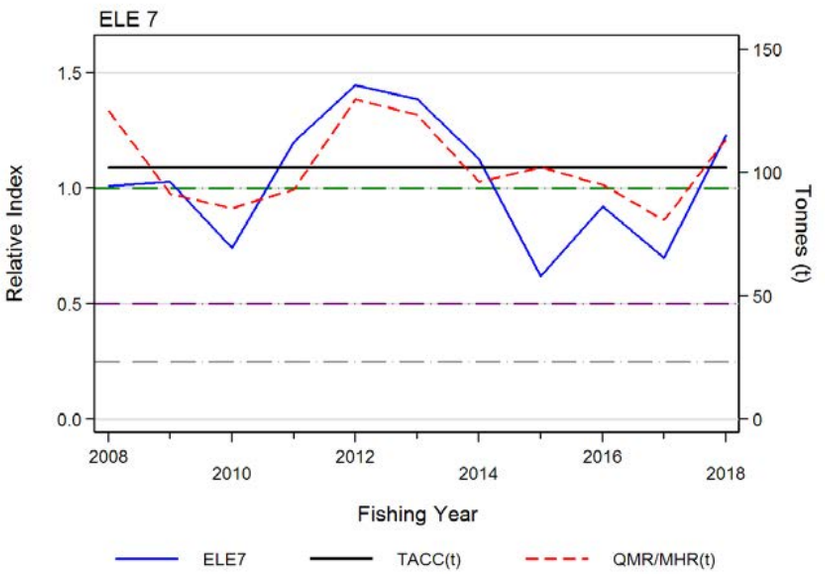
33. It needs to be remembered that this fishery is not large and is primarily by-catch. It has increased significantly since QMS introduction based primarily on steady recruitment pulses and does not appear to be decreasing.

34. We request that in order to provide an appropriate utilisation level and be able to limit any payment of deemed values, that the TACC be set at 250 tonnes.

Elephantfish 7 (ELE7)

35. We do not accept FNZ not reviewing the TACC of this fishery. A Characterisation and CPUE update was presented to the working group in 2019 and it was reviewed and accepted. The working group agreed that the mean 2007/08 to 2017/18 index of abundance series could serve as a Bmsy proxy target. It is therefore disappointing to see that FNZ did not review this stock on that basis given that the most recent index is above the target level. Applying harvest strategy limits should allow for the more-timely review of such fishstocks particularly when they are trending upwards and above the target limit.

36. The review paper provides little discussion or analysis on why this fishery could not have been reviewed this year for a TACC increase and proposes only the setting of a TAC! We don't understand the rationale for that position? The resources taken to provide ELE7 in the paper could have warranted additional analyses for a TACC increase proposal.



Comparison of the ELE 7-BT(tow-by-tow) CPUE series with the TACC and QMR/MHR landings for ELE 7. The agreed *BMSY* proxy (geometric average: 2008–2018 ELE 7-BT(tow-by-tow) CPUE indices=1.0) is shown as a green line; the calculated Soft Limit (=0.5x*BMSY* proxy) is shown as a purple line; the calculated Hard Limit (=0.25x*BMSY* proxy) is shown as a grey line.

37. Southern Inshore invested in contracting a service provider to do a Characterisation and CPUE update for ELE7 so that this information from the fishery could be coupled with the 2019 WCSI trawl survey. The results of the CPUE were presented to the working group even before the trawl survey got underway and were ratified. Undeniably, FNZ had the most recent and best available information that supports a TACC increase at some level.

38. As an outcome of this consultation we respectfully request that FNZ promote to the Minister that the TACC for ELE7 needs to be increased. We are consistently told that any advice that can be given to FNZ under consultation will allow them to provide better information allowing the Minister to make better decisions. We urge FNZ to present this position accordingly.

Flatfish 7 (FLA7)

39. We do not believe that FLA7 needs to have a Characterisation and CPUE update in 2019/20 until the issue around the review of SNA7 and other associated by-catch species is addressed and the TACC's for those stocks are set at appropriate levels. We know now that the CPUE of FLA7 will be down based entirely on the fact that fishermen are being forced to avoid by-catch therefore not catching Flatfish. We are aware of vessels having moved to other areas, having reduced the number of trips per week and having altered gear to avoid. All of these actions have had significant implications on the volume of Flatfish that might have been otherwise taken.

40. Flatfish is a Schedule 2 fishstock under the Fisheries Act which allows the TACC to be set at a higher rate to allow for variable fluctuations in the abundance of this stock. Flatfish is a short-lived species that experiences highly variable catch rates and should arguably not even be in the QMS. We certainly do not want to see the debacle that has unfolded from the in-season TACC model, whereby the decision-making process fails to address TACC changes in a timely manner.

41. FNZ have been approached annually to review the TACC for FLA3 downwards allowing for what is a legitimate utilisation opportunity whilst still managing it under the variable schedule thereby providing for improved abundance in the event that it is needed. To date, FNZ have ignored requests for this improvement in management preferring to run the model each year regardless of the resources required knowing all the time that it provides no value.

42. Southern Inshore would prefer FNZ not wasting time and resource on a costly CPUE and characterisation for FLA7 when a better approach would be to allow the shareholders to manage it collaboratively in a much better and meaningful way. If FNZ have concerns about the status of this stock they should simply engage and express that concern. The shareholders can then propose how that concern might be addressed?

43. **Appendix 3** provides an outline presented again last year of the annual decision-making process and the failure of the model to address in-season reviews and reflects on the setting of more appropriately set static TACC's. We should not repeat the situation we have been placed in for so many years with FLA3 and RCO3 in-season modelling that has seen FNZ resources absorbed, all the time knowing that the outcome would be unacceptable. Southern Inshore would prefer that FNZ resources were better placed looking at stocks that require it and that would provide real value.

Snapper 7 (SNA7)

44. It is impossible to review a fishery complex for the Top of the South or West Coast South Island without considering SNA7 especially when the biomass, recruitment and catch trends in this fishery are continually increasing. Fishers have incurred excessive deemed values and are forced to avoid snapper throughout the full extent of FMA7. No fisher should have to avoid catching fish when the abundance levels are at such a high level in the absence of any sort of meaningful management. It is an absolute travesty that the efforts of fishermen in managing this stock at sustainable levels for three decades cannot be rewarded. This situation is serious and can no longer be ignored.

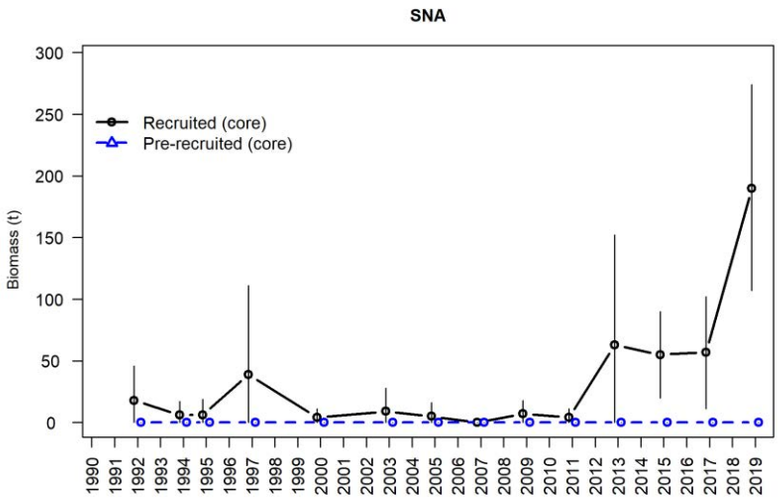
45. FNZ continue to deny a review in this fishery until a full stock assessment is done whilst it is accepted that the abundance is above the interim target biomass and that the recreational allocation was incorrectly set in 2016. This oversight was ignored again in 2017 and 2018 and continues to cause a serious legal inequity and unnecessary pain for the Industry. **See Appendix 2 for further discussion on the allocation failure.**

46. The most recent 2019 WCSI trawl survey shows a large increase in the recruited biomass and total biomass in the Tasman/Golden Bays and WCSI areas for SNA7. These results continue to be ignored. This is not a responsible display of fisheries management and needs to be addressed urgently. It is simply unacceptable to continue ignoring the science and doing nothing with the TACC whilst fishermen are forced to avoid productive fishing, end up paying exorbitant deemed values or be perversely incentivised and adopt poor behaviour.

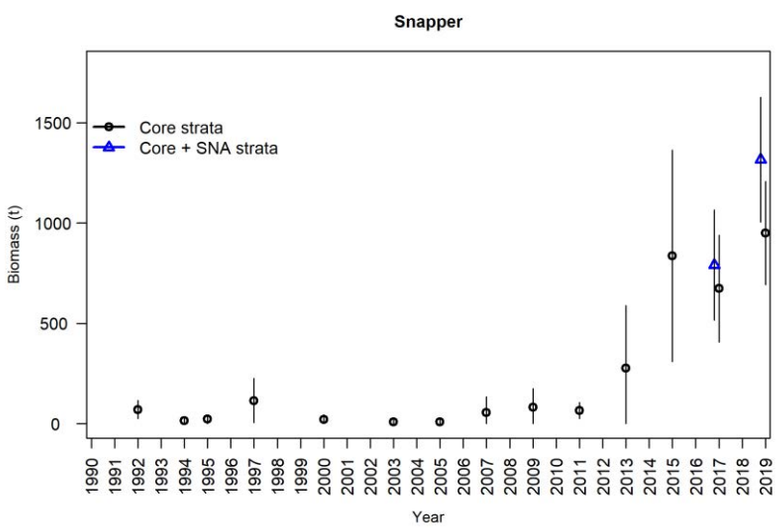
47. The trawl survey results have been used to assess GUR7, SPO7 and JDO7 and therefore could have been used to assess and review SNA7 for a TACC review in 2019. The following graphs clearly show that.

48. There is nothing unclear about what should be done with this TACC. The situation is serious with SNA being caught throughout the range of Area 7. Fishermen chasing Tarakihi and Warehou between Farewell Spit and Westport are experiencing SNA bycatch and are having to avoid these species as a result. There is nothing else for these vessels to do! Over the past two weeks a small 40-foot trawler caught 500 kg of SNA just north of Jackson's Bay in one tow! That is simply unheard of and further strengthens the need for urgent attention. Fishermen are leaving their traditional fishing grounds and some have even cut their trips back in order to reduce impacts and as a consequence have experienced serious financial losses.

49. When SNA7 was introduced into the QMS in 1986, all of the catch history that formed those initial allocations had been caught in Tasman and Golden Bay. At the time, catching a snapper fish outside that area was simply unheard of. The range extension that we are experiencing now would never have been contemplated. We may have to consider that any increase in TACC is apportioned to Tasman Bay, Golden Bay initially but also consider a specific allocation for WCSI?



Plot of recruited and pre-recruited snapper from the 2019 west coast South Island trawl survey.



Plot of core strata for snapper from the 2019 west coast South Island trawl survey.

50. Industry have been asked by FNZ to direct purchase the stock assessment for a 2020 review, bringing the assessment forward from 2021. As there was a stock assessment in 2018 which showed the same trends as the most recent trawl survey and FNZ have continued to ignore the need for change, Industry wonders how the expenditure of circa $50,000 could provide any value?

51. The preference would be in the first instance to readjust the allocation accordingly to reapply the over-allocation to the recreational sector to the commercial sector for 1 October 2019 rather than some political imperative to maintain a 50/50 approach to supposed shared fisheries. Secondly, the stock assessment could then run in 2021 after inclusion in the 2020 Fisheries Services round where it would then be fully Crown funded.

Review of Sustainability Measures for Gemfish (SKI 3 and 7) 2019/20 – Paper No: 2019/11

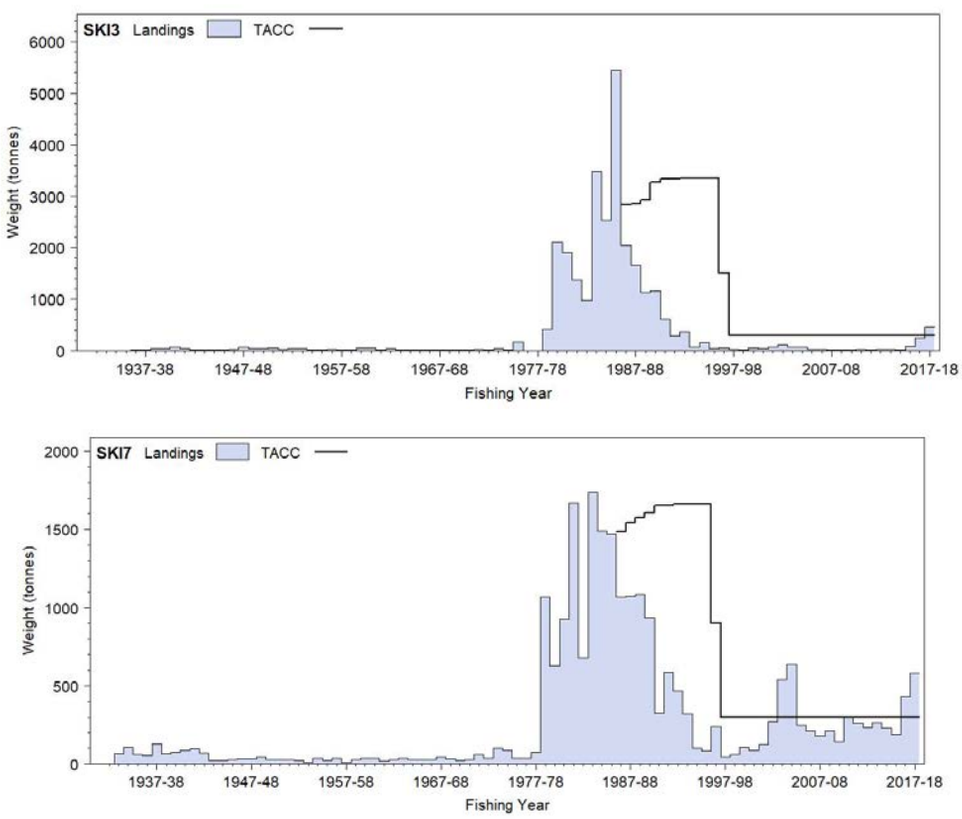
52. We agree that both SKI 3 and SKI7 should be reviewed and that Option 2 is preferred for SKI3 and Option 1 for SKI7 which would raise the TACC for both stocks to 600 tonnes.

53. Both SKI3 and SKI7 are categorized as Tier 2 stocks under the National Fisheries Plan for deepwater and middle-depth fisheries. Tier 2 fisheries are typically less valuable bycatch fisheries or are only target fisheries at certain times of the year. Species with Tier 2 are monitored by the performance of the main fisheries under Tier 1 which are high volume and/or high value fisheries and are traditionally targeted.

54. Whilst gemfish are included under the deepwater fisheries plan they are also represented by commercial stakeholder organisations (CSOs) with inshore stock specific focus. Both SKI 3 and SKI 7 are regionally represented by Southern Inshore.

55. In the most recent two years quota owners have paid deemed value amounts of $262,775 in SKI3 and $802,189 in SKI7.

56. Recent catches in both SKI3 and SKI7 clearly show increased and a preliminary stock assessment of this southern gemfish biological unit was completed in 2019 and presented to the working group. The assessment included standardized CPUE indices, observer-derived length composition data, and fisheries independent data sets from research trawl surveys.



Reported commercial landings and TACC for SKI3 and SKI7.

57. As noted in the consultation paper, the working group considered there was sufficient information

available from trawl surveys and commercial fisheries to conclude that there has been a considerable increase in stock abundance in recent years and likely due to strong 2014, 2015, and 2016 year-classes recruiting to the fishery.

58. With the agreed likelihood that the stock size will continue for the next 1-3 years we see the proposed TACC increases as a proactive management approach, therefore covering the present catch levels and reducing the potential for fishers to incur deemed values across this period.

Preferential Allocation Rights (28N rights)

59. Whilst we recognise the concerns of Te Ohu Kaimoana in respect of the discharge of 28N rights and the effect that will have on iwi quota shares (being reduced proportionally to accommodate this release of shares) we need to balance that against the financial impact imposed on fishermen from continued deemed value payments. Paying $1.1m whilst ignoring scientifically supported increasing abundance in SKI3 and SKI7 is overly excessive and unwarranted. There has to be a more equitable approach and appropriate mechanisms need to be developed to address the concerns of iwi rather than imposing economic impact on those that agreed to the preferential allocation before the 1992 Fisheries Settlement.

60. We agree with Option 3 that promotes maintaining the current TACC's whilst adopting additional management controls as proposed through the commercial industry collective Eastern Tarakihi Management Strategy.

61. Options 1 and 2 do not provide for fisheries management, integrated research on a number of aspects of the species and population, nor provides strategic guidance on any rebuild to these fisheries. They prefer to promote the blunt instrument (large TACC reductions) which generally equates to a myopic 'set and forget' principle.

62. We have been disappointed with the commitment by FNZ to work collectively with industry to develop the TAR Management Strategy. In the absence of an inshore fisheries plan it is paramount that FNZ have a strategic approach to fisheries management and the development of the east coast TAR strategy should have been prioritised by FNZ. To look at just reducing the TACC significantly from one only stock assessment is myopic. Industry has provided an approach that looks at improved management measures and monitoring plans that reflect a real-world view of the biomass rather than a policy driven 40% $B_{0,}$ which supposedly links species with similar characteristics together but does not explore any differences that may occur after a stock assessment or other related work on that species is completed.

63. Southern Inshore is a member of FINZ and has contributed to the collective industry submission and rebuild strategy. Our views in respect of our representative stocks (TAR 3 and TAR7) are encapsulated in the industry submission and management strategy.

Review of Deemed Value Rates for Selected Stocks October 2019
Paper No: 2019/16

Need for Regional Deemed Value Setting

64. Southern Inshore (and previously as Challenger Finfish Mgmt. Co.Ltd) has for a number of years advocated that deemed values should be set on a regional basis that reflects the port price index within the region, rather than an average index which can be majorly influenced by higher market values from the North Island and beyond.

65. In the absence of incorrectly set TACC's a more meaningful deemed value system is essential. We are doing the fishers of NZ a major disservice by not treating this matter with more seriousness. We should be providing a system that encourages the landing and recording of all fish and we should be using this information to guide us in making better management decisions. To do otherwise is to just ignore Governments continued claims regarding economic opportunity.

66. We again would like to propose to work with MPI to review the deemed value regime and include the development of a schedule of regional deemed values. It needs to recognise that Industry is not looking for 'something for nothing' here. We want to participate in a very important process that sees Industry and MPI develop a far more workable environment.

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

Review of Deemed Value for BNS 7

68. We do not agree that the deemed value rate for BNS 7 has to be reviewed.

69. Table 3 lists a Rationale for review -being subject to a TAC review in 2019. There is no TAC review proposed for 2019 as a consequence of the outcome of the stock assessment in 2019.

70. After a number of updates to the BNS stock assessment (Dec 2018-Apr 2019, plus Plenary) the outcome of the stock assessment was not accepted by the working group. Therefore, on this basis, and the fact that the work did not propose a further decrease or review of the TACC it is inappropriate for FNZ to promote a review of the deemed value for BNS7.

71. As BNS7 is only one stock under the single pan BNS NZ stock assessment which is under a rebuilding plan and regular assessment, FNZ cannot simply propose to review the deemed value without any justification other than a small proportion of overcatch of the TACC within a rebuilding phase of this fishery. No analysis of the overcatch comparative to the wider BNS stock has been included.

Review of Deemed Value for KIN 3

72. We agree that the deemed value rate for KIN3 should be reduced and set at the FNZ proposed deemed value rates.

73. The current deemed value rate is far in excess of the port price and given that the abundance has shown a dramatic increase in recent years, to the point that FNZ recognised the need to increase the TACC in 2018. Southern Inshore still propose that the current TACC level is too low and that whilst the reduction in deemed value is appropriate based on port price settings it is not the

complete management approach that should be taken for KIN 3. The TACC needs to be increased further and the provision under Schedule 6 of the Fisheries Act for the restriction on set net vessels to return KIN to the sea alive has to also be addressed by its removal.

74. FNZ management need to consider that as a bycatch species that increasing the TACC further may not impact on the stock abundance given that it appears that climatic conditions are assisting the abundance to increase and potentially warmer waters allow it to migrate to wider areas. It has been related to us by a scientist that KIN adults may tend to stay in a region and that the younger fish migrate out of the area. This may be a territorial or food related response. Tagging of KIN has certainly shown that those tagged in KIN1 have shown up in KIN3 near the entrance to Cook Strait. Such considerations need to be taken into account rather than simply applying deemed value changes.

Review of Deemed Value for RBY 5

75. It is inconceivable that FNZ has spent valuable resources to review the deemed value for a stock that obviously requires a TACC to be set first that would see the issue of deemed value accrual to be negated.

76. Irrespective of whether only 5 tonnes of RBY5 has been taken since 2001, it should not stop FNZ to simply set a TACC/TAC for this stock. We draw your attention to the ELE7 review which has proposed to set a TAC since a TACC is already set. Whilst Southern Inshore's preference is a review to the TACC it does however show that the proposal to set a quota takes minimal effort and drafting.

77. RBY 5 is a good example where it can be addressed under a 'suite of species' to address such inconsistencies.

APPENDIX 1

Summary of request to review the TACC for various stocks for 1 October 2019 and Research Planning to 2019/2020

The following fishstocks are proposed for review for 1 October 2019: A full background paper will be presented to Fisheries NZ once confirmation of fishstocks to take forward for this review period.

Fishstock	Current TACC(t)	Proposed TACC(t)	Deemed Value Review	Support
GUR 7	975	1100	No	Shareholders
Justification	Utilisation opportunity. TACC consistently overcaught, except for 2017/18 where upwardly of 85% was taken. Some fishers can have overcatch situations and unable to access ACE even though the TACC is undercaught. This fishstock is monitored by the WCSI trawl survey which will be run again in 2019, whereby the most recent results can be used.			
JDO 7	209	250	No	Shareholders
Justification	Utilisation opportunity. Current TACC may be constraining main target fishstocks in other fisheries where JDO7 is caught as a bycatch. The 2017/18 TACC was overcaught again (104%). Monitored by the WCSI trawl survey as a 'pseudo' target species. The 2017 biomass (down slightly from the 2015 survey) but highest in the times series (431t, 12%), second highest estimate in the time series. Strong 1+ mode (21-32cm) fish coming through the fishery especially in TBGB. This is the strongest this mode has been in any survey in the time series. TACC increase requested which can be further assessed against the 2019 WCSI survey.			
SKI 3	300	550	$0.72 new DV as of 2018	Shareholders
SKI 7	300	550	$0.72 new DV as of 2018	Shareholders
Justification	Catches off the west and southern coasts of the South Island are primarily bycatch of hoki and squid target fisheries. Reported landings in SKI7 were more than double the level of the TACC in 2004/05 but decreased in the following years until again exceeding the TACC in 2016/17 and 2017/18. Landings in SKI3 were at very low levels from about 1993/94 to 2015/16 until increasing in 2016/17 and 2017/18. Whilst the majority of the SKI catch is taken incidentally by the deepwater fleet, a larger proportion than normal is being taken by the inshore fleet. Although the DV has been decreased from $1.29 to $0.72 for both stocks is a positive move it does not allow the utilisation opportunity in both these fisheries from the apparent increasing abundance. Southern Inshore will be providing an updated characterisation to the previous one completed in 2015 and reflected the 2008-2012 period.			
SNA 7	250	350	No	Shareholders
Justification	Consistent overcatch and avoidance by fishers. Trends indicate high potential for consistent overcatch given rebuilding status of the fishery. The additional TACC request is based on a step-wise approach trending with continued increasing abundance. This fishery has been assessed by CPUE analysis, size frequency, analysis from processed product, WCSI trawl survey, catch at age sampling and otolith collection, population simulation model, and stock assessment. Additional age sampling data to be added to the			
SPO 7	271	325	No	Shareholders

Justification	Utilisation Opportunity. Precautionary incremental increase requested for 2017-18, which saw a modest increase. Further increase requested for 2018-19. CPUE update for all SPO stocks completed in 2016 with increasing trend for SPO7 BT(ALL) and WCSI trawl survey abundance indices positive. A further CPUE update will be presented to the working group in 2019. Indicative indices from the 2019 WCSI trawl survey will be available. Set net regulatory closure and the Farewell Spit voluntary closure to pupping females are aiding this increasing abundance.			
SPO 3	600	700	No	Shareholders
Justification	Utilisation Opportunity. Precautionary incremental increase requested for 2018-19. The majority of SPO3 is taken in the shark setnet and bottom trawl fisheries directed at a range of species, with additional small amounts landed by Danish seine vessels. The working group accepted the CPUE standardisations for SN(SHK) and BT(ALL). At the time of the last assessment in 2016, the trawl series showed an increasing trend 1989/90 to 2014/15 and the setnet series fluctuates without trend. The most recent year saw the TACC overcaught at 107%. Abundance indices will be available from the 2018 ECSI trawl survey and 2019 update to the Characterisation and CPUE for all SPO stocks.			
STA 7	1122	1225	No	Shareholders
Justification	Utilisation opportunity. Current TACC may be restricting utilisation of main target fishery where STA is caught as a bycatch. Biomass in this fishery still above the long-term average. WCSI trawl survey results show the biomass is down from 2015 (1674t, 14% CV) but still above the time series mean (1546t). A further trawl survey in 2019 will be done with indicative indices available.			
TAR 8	225	270	No	Shareholders
Justification	Utilisation opportunity. TACC consistently caught for a number of years. Shift of effort away from SNA8 has caused fishers to operate more offshore and therefore catching more TAR. Request made in 2016/17 and 2017/18 for a TACC increase but industry only received increased DV in 2016/17 as a consequence of the overcatch situation. Better management approach needs to be adopted. Precautionary increase in TACC requested. TAR8 is not part of the East Coast TAR stock situation and should therefore be assessed separately for a TACC increase. Fishers are being constrained due to the static review of the SNA8 fishery and are trying trawl gear mitigation methods to exclude SNA. With the lack of access to SNA ACE, fishers are dependent on other fishstocks for revenue, one of course being TAR8. Results of a new West Coast North Island trawl survey should be made available early 2019 for review of TAR 8 abundance. It is unsure what the profile of TAR8 catch will be from the survey as it does not survey the deeper 200m areas.			
In-Season Stock Review				
FLA 3	1460	1600	No	Shareholders
Justification	Static TACC request to 1,600t has been made by SIF for a number of years now, with the option of running the in-season model when required. The timing of the in-season review and decision-making process do not allow a decision to be made in time for increased utilisation opportunity. Typically, the decision is August or September, hardly making it a very 'in-season' process. To optimise this fishery the TACC needs to be readjusted to 1600t to provide utilisation at the start of the fishing year not post-season.			

RCO 3	4600	5500	No	Shareholders
Justification	Static TACC request to 5,500t has been made by SIF for a number of years now, with the option of running the in-season model when required. The timing of the in-season review and decision-making process do not allow a decision to be made in time for increased utilisation opportunity. Typically, the decision is August or September, hardly making it a very 'in-season' process. To optimise this fishery the TACC needs to be readjusted to 5500t to provide utilisation at the start of the fishing year not post-season.			

Low Knowledge Stock Review

Fishstock	Current TACC(t)	Proposed TACC(t)	Deemed Value Review	Support
ELE 7	102	150	No	Shareholders
Justification	Utilisation opportunity. This fishery fluctuates and in some cases is dependent on the fisher's effort in other parts of the WCSI mixed trawl fishery as well as being influenced by those vessels absent from the fishery when there are good years for albacore troll. The fishery was overcaught in 2017/18 and fishers indicate very good catches in some individual trawl shots. SIF is proposing to update the CPUE for this stock and present it to the working group in 2019.			
HPB 3	335	385	No	Shareholders
Justification	Utilisation opportunity. Continued increasing trend in catches and overcatch of the TACC again in 2017/18. Precautionary TACC increase proposed. HPB is caught by line, setnet and trawl. The setnet fishers in Kaikoura target this fishery generally Jul/Aug. Upwardly 94% of the ACE has been caught the last couple of years. KIN bycatch can be an issue in the HPB3 setnet fishery. Whilst the small increase in the KIN TACC will assist some fishers, the fact that the return to the sea from KIN caught by set net is not allowed under Schedule 6 (FA). The retention of KIN is impacting on revenue from the HPB fishery. Whilst the abundance is not as prevalent in some southern areas as previously, the opposite trend appears to be happing in the northern Kaikoura area.			
KIN 3	6	9	Consideration of DV review	Shareholders
Justification	Utilisation opportunity. TACC consistently overcaught since 2013. As of the end of the first quarter of the 2017/18 fishing year it was 64% overcaught. There is an expectation that this fishery will be overcaught again in 2018/19. There is increasing trends in catches and availability in both KIN 3 & KIN 7 to the extent that KIN3 is observed and caught as far South as Foveaux Strait. The bycatch of KIN3 in the HPB3 fishery is becoming increasingly problematic given that setnet caught KIN is not allowed to be returned to the sea under Schedule 6 (FA), but is allowed for trawl caught KIN.			
KIN 7	15	30	Consideration of DV review	Shareholders
Justification	Utilisation opportunity for both KIN3 and KIN7 needed. Stock being caught in both regions further south than in other years and is a limiting bycatch to other target/mixed species fisheries. The JMA target vessels are catching a reasonable percentage of the KIN7 TACC. The lack of ACE in this fishery is not assisting the potential utilisation opportunity on the WCSI and further South where KIN7 is becoming more prevalent for inshore fishing vessels. Levels of TACC adjustment for such environmental influences need to be more reactive and the DV			

	more in line with regional port prices to allow for cost effective landing of fish. At the end of the first quarter of the 2017/18 fishing year the stock is already 50% caught and it is expected to be similar for 2018/19.			
LEA 3	130	170	No	Shareholders
Justification	Utilisation opportunity. TACC consistently caught since the 2013 TACC increase. LEA3 is not optimised under the ECSI trawl survey, but is monitored via catches. ECSI trawl survey results to be presented Nov 2018. Incremental increase requested for 2018/19 fishing year.			
MOK 3	160	190	No	Shareholders
Justification	Utilisation opportunity. Increasing catch and abundance in the Kaikoura set net region and by bottom trawl bycatch southern east coast South Island. CPUE update and characterisation with MOK1 completed in 2017 but unable to find a suitable index of abundance from SN fishery. The TACC has been overcaught again in 2017/18 as it was for the previous 2yrs and 92% caught the year before that. Target catches potentially being constrained due to the bycatch of KIN3 which when caught by setnet is not allowed to be returned to the sea under Schedule 6 of FA. SIF is promoting that this provision be removed to allow return.			
RBY5	0	10		Shareholders
Justification	There is currently no TAC or TACC for RBY5 but there is an annual deemed value rate set at $0.25. Whilst only small amounts of DV are being accrued, this should not be a burden on the quota owner when there is a clear oversight on setting a TACC (even nominal) for this stock. A full review of all QMS should be made in this same context.			

Research Plan 2018/2019

Fishstock	Research Proposal
Mixed species	West Coast South Island Trawl Survey – March-April 2019
SKI 3&7	Characterisation update
ELE 7	Rapid CPUE update

APPENDIX 2

{Taken from the Southern Inshore submission on SNA7 in 2016}

Allocation and Management of Recreational Catch for SNA7 Fishery

1. Southern Inshore understands that the Discussion Paper 2016/18 on the Review of Management Controls for the Snapper 7 Fishery presents two options for future management of the SNA7 fishery and requests submitters' views on which option is preferred. This is what Southern Inshore's main submission has therefore focused on. However, Southern Inshore would also like to register its continuing concerns and emphasises the need for proper management and control of the recreational catch, as set out in this Appendix.

2. In summary, the present circumstances relating to SNA7 the rationale offered in the Discussion Paper for the proposed reallocation of TAC between commercial and non-commercial interests from 70/30 to 50/50 is extremely light on analysis. This adjustment in allocation proportions has not been sufficiently justified and devalues the quota entitlements commercial fishers currently have in the context of the QMS as a whole. It seems the rationale is essentially that recreational catch has been held down through the historically depleted state of the fishery and that the proposed allocation of an equal proportion reflects current recreational catch in light of the current higher yields and biomass. In other words, the adjustment reflects that the non-commercial sector is considered to be entitled to benefit in this way (and to this extent) from the significant reductions in commercial catch, over many years, that have allowed the stock to rebuild. It also allows them to benefit from what has been gross exceedance in (and mismanagement of) its allocated share of the TAC in the past.

3. The Discussion Paper demonstrates the continuing failure of the Crown to monitor and control the recreational catch.

4. In circumstances where:

    a. recreational fishers are already estimated to be catching their revised allowance (250 tonnes);

    b. there has been a massive (300%) increase in the recreational catch in the past five years;

    c. where the biomass is expected to increase further as the fishery approaches the target biomass levels; and

    d. where there has been no suggestion that the current bag limits are operating as any real constrain on the recreational catch,

    it is clearly irrational and irresponsible not to be urgently addressing the failed management constraints on the recreational catch to ensure it remains within the proposed allowance.

5. The proposal to allocate the TAC 50/50 between commercial and non-commercial interests is an explicit endorsement of those past exceedances and mismanagement in the recreational fishery. That is no way to manage any fishery.

Reallocation of TAC between Commercial and Non-Commercial Sectors

6. Under 'Option 2' in the MPI Discussion Paper:

    a. the overall TAC for SNA7 will increase from 306 tonnes to 545 tonnes. As noted in the main submission, Southern Inshore <u>supports</u> this TAC increase; however

    b. MPI proposes to allocate the new TAC on the following basis:

        i. the TACC will increase by 50 tonnes from 200 tonnes to 250 tonnes;

        ii. the recreational fishing allowance will increase by 160 tonnes from 90 tonnes to 250 tonnes;

        iii. the allowance for Māori customary fishing will increase by 4 tonnes from 16 tonnes to 20 tonnes; and

        iv. the allowance for other fishing-related mortality will increase by 25 tonnes from 0 tonnes to 25 tonnes.

7. This is a shift in the ratio between commercial and recreational fisheries from 70/30 to 50/50.

8. The significant increase in the recreational allowance is said by MPI to be justified as:

    a. it more accurately reflects the actual level of current recreational take based on (incomplete) recreational catch surveys;

    b. it better reflects the relative value of the fishery to the recreational sector, with their historical take having been compromised by the previously depleted nature of the fishery; and

    c. the current state of the fishery has allowed the recreational catch to increase substantially since 2011/2012, with it predicted to have tripled between that last estimate and this upcoming fishing year.

9. The 4 tonne increase to Māori customary take, while small in tonnage terms, is significant in percentage terms (a 25% increase) but unexplained on the face of the Discussion Paper. The Paper acknowledges that there are very few customary authorisations reported to MPI (reporting being a legal requirement) for SNA7, and concludes that Māori must be taking their entitlement within the recreational allowance. That being the case, there appears no justification for any increase.

10. The law concerning the Minister's discretion to set a revised TAC that allocates the available yield between users is now reasonably well-settled (as a result of the *Snapper* and *Kahawai* cases).

11. These decisions concluded that:

    a. The allowance for non-commercial fishers, and within that recreational fishers, is an allocation that must take into account current and future controls able to be imposed by regulation on recreational catch.

    b. Neither commercial nor non-commercial interests have any priority in the allocation. Rather, the Minister has a broad discretion to allocate the TAC between sectors having regard to all relevant information affecting that fishery.

    c. In making this allocation, the Minister can take into account changes in population patterns and population growth and must take into account the impact of any such decision on the QMS and needs to be transparent about the reason for the decision.

12. The Courts have noted the impact that setting an allowance for non-commercial interests would have on the commercial sector and that the Minister needed to recognise this:[1]

> The requirement to have regard to the total allowable catch also indicates that the Minister must at each stage keep in mind that s 21 is concerned with allocation of a limited resource and that what is allowed for non-commercial fishing interests will impact on the total allowable commercial catch.

No priority to recreational sector

13. In the *Kahawai* case recreational fishers argued strongly that their "allowance" should have priority over commercial fishers, relying in part on the wording of the Act and in part on the so-called "common law right to fish". The Supreme Court rejected this argument. In relation to the Fisheries Act, it held:[2]

> The sequential nature of the method of allocation provided for in s 21 does not indicate that non-commercial fishing interests are to be given any substantive priority over commercial interests. In particular, the allowance for recreational interests is to be made keeping commercial interests in mind. Within the statutory framework this is an area in which the Act envisages that the Minister has room to make policy choices. The Minister may set or vary the total allowable commercial catch at or to zero. The Act also envisages that provision will be made for non-commercial fishing interests in the stock. Implicitly that must be a reasonable provision in all the circumstances but these will include the fact that there is a limited resource in which others, including commercial fishers, have an interest. Within these limits, ss 20 and 21 leave it to the Minister to decide the basis on which he or she will decide on the appropriate allocations and what in the end the total allowable commercial catch is to be.

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[1] *New Zealand Recreational Fishing Council Inc v Sanford* [2009] NZSC 54 [*SC Kahawai*] at [53].

[2] *SC Kahawai*, at [61].

14. More generally the Court emphasised that decisions as to what was an appropriate allocation as between commercial and non-commercial interests was a policy decision:[3]

> In the end, within the limits provided for by the Act, the Minister makes a policy decision as to what allocations are appropriate for non-commercial interests and other mortality and what is to be the total allowable commercial catch. These decisions are interdependent. The Act does not confer priority for any interest over the other. It leaves that judgment to the Minister. The Act envisages that the allowance for recreational interests will be a reasonable one in all the circumstances.

15. In this context the Courts have considered the Minister could take into account changing population patterns and population growth, and needs to do so:[4]

> A further matter which points against any implication of proportionate reduction is that the Minister is in our judgment entitled to bear in mind changing population patterns and population growth. If over time a greater recreational demand arises it would be strange if the Minister was precluded by some proportional rule from giving some extra allowance to cover it, subject always to his obligation carefully to weigh all the competing demands on the TAC before deciding how much should be allocated to each interest group.
>
> …
>
> What the proportion should be, if that is the way the Minister looks at from time to time, is a matter for the Minister's assessment bearing in mind all relevant considerations.

Need to consider impact on QMS and provide reasons

16. The *Snapper* decision also recognised the need for the Minister, when making significant decisions that had the potential to impact on the integrity of the QMS, to take this into account and to be transparent about the reasons for decisions.

17. While this *Snapper* decision and the statement set out below was made in the context of a proposed TACC reduction, the underlying reasoning is as relevant to any reallocation decision in the context of an increasing TAC. The Court said:[5]

> In the Crown's submissions, a number of matters were identified as purportedly justifying the immediate and substantial economic hardship caused by the decision and what might well be seen as a substantial undermining of the QMS as a whole. Whether those matters, which were themselves not the subject of much cost/benefit analysis, were sufficient to justify the prima facie economic harshness of the Minister's decision is not something which requires decision. All we wish to say for the future is that the Minister would be wise to undertake a careful cost/benefit analysis of a reasonable range of options available to him in moving the fishery towards MSY. If the Minister ultimately thinks that a solution having major economic impact is immediately necessary, those affected should be able to see, first, that all other reasonable possibilities have been carefully analysed, and, second, why the solution adopted was considered to be the preferable one.

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[3] *SC Kahawai*, at [65].

[4] *New Zealand Fishing Industry Association Inc v Minister of Fisheries* CA82/97, 22 July 1997, [*CA Snapper*] at page 18.

[5] *CA Snapper*, at page 23.

18. When the Court was referring to the potential for TAC and TACC decisions to have the effect of "substantially undermining the QMS as a whole" it was referring to evidence that had been given explaining from a law and economics perspective how such decisions could destroy the economic incentives inherent in the QMS. The QMS uses an economic framework (the creation and allocation of property rights in perpetuity – quota) to achieve key fisheries management objectives. The creation of secure property rights is intended to (and has in practice) incentivised commercial fishers to nurture, develop and protect the fishery. The long-term value of their quota is inextricably bound up with the long-term sustainability of the fishery.

19. One of the key enhancements to the QMS over time was the creation of proportional quotas in 1990, which transferred the biological risk of TAC changes from the Crown to quota owners. Quota owners bore the full economic cost of TACC reductions but received the benefit of TACC increases. Again this incentivised commercial fishers to take a long-term view as to what levels of catch were sustainable and incentivised them to endure the pain of TACC reductions if, in the long-term, that would allow a fishery to rebuild. It is critical, therefore, that commercial fishers understand that they will receive the benefit of TAC increases when a fishery rebuilds given the economic framework represented by the QMS.

20. If decisions relating to the setting of TACs, TACCs, and allowances for non-commercial use are made in a manner that ignores this fundamental economic framework then, as the Court of Appeal reminded the Minister, this has the potential to substantially undermine the QMS framework as a whole. While the Court of Appeal's decision in the *Snapper* decision confirms that some reallocation is legally permissible, in appropriate circumstances, it is critical that this is done in a manner that protects the integrity of the QMS and looks to insure quota owners' rights and expectations are not unreasonably displaced. The reallocation of a fishery in an unprincipled way will undoubtedly undermine the QMS.

Summary

21. In summary:

    a. In the present case the increased allocation for customary Māori take seems to ignore the best available information as to the likely level of customary utilisation. There seems no rational basis for believing that allowance (albeit small) will be utilised and in that sense it has the effect of setting aside part of the TAC and preventing it from being taken. Put another way, given the need for the total TAC to be allocated, this yield should properly form part of the TACC absent further information (which MPI don't seem to hold).

    b. The allowance for non-commercial fishers, and within that recreational fishers, is an allocation that must take into account current and future controls able to be imposed by regulation on recreational catch. The proposal in the Discussion Paper does not do that.

c. Non-commercial interests have no priority in the allocation. Rather, the Minister has a broad discretion to allocate the TAC between sectors having regard to all relevant information affecting that fishery.

d. In making such decisions, however, the Minister must take into account the impact of any such decision on the QMS and needs to be transparent about the reason for the decision. The proposal in the Discussion Paper clearly does not do that. The decisions and its justification undermine the QMS framework.

e. In making allocations, the Minister can take into account changes in population patterns and population growth. In doing so, the Minister must act in light of the evidence and best available information. The proposal in the discussion paper does not meet that test.

Management of the recreational catch

Historical context in issue

22. The commercial fishing sector has been expressly concerned for decades at the Crown's failure to put in place measures to, first, properly monitor and assess the recreational catch and, second, to constrain it, through appropriate management measures, to its allocated share of the TAC.

23. For their part, successive governments have repeatedly acknowledged the central importance of good information to fisheries management. Whilst MPI have acknowledged the need to constrain the recreational sector to its allocated share of the TAC they only pay lip service to this need.

24. This can be seen in the following, now historical, policy documents:

a. As far back as 1983, the then Assistant Director of the Fisheries Management Division of the Ministry of Agriculture and Fisheries published an article in which he said:[6]

> In New Zealand, concern about the interaction between marine recreational fishermen and commercial fishermen, has largely been that recreational fishing should be to some extent protected from commercial fishing. It should also be recognised that recreational fishing, which currently has minimal management (for example no licensing is required, and there is no control and little knowledge of total recreational fishing effort) may have substantial impact on some commercial fisheries. In some cases, commercial fisheries may need protection from recreational fisheries.

b. In 1991 the Government commissioned a report from Dr Peter Pearse on fisheries policy development in New Zealand.[7] Dr Pearse, of Canada, is internationally recognised as an expert in natural resources management. At

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[6] "Growth has led to conflict" (June 1983).

[7] See Peter H Pearse *Building on Process: Fisheries Policy Development in New Zealand: A report prepared for the Ministry of Fisheries* (July 1991).

page 9 of his report he argued for the recreational sector to be allocated an explicit share of the fishery. He said:

> The absence of specific rights, and any form of licensing, leaves a dearth of information about the numbers of recreational fishers and their catches of fish. This is essential information that recreational fishing groups need to promote their interests, and resource managers need to manage recreational fisheries.

c. A year later the then Minister of Fisheries commissioned a Task Force to review the fisheries legislation. Their report, released in 1992, concluded that one of the major issues raised by submissions from representatives of recreational fishing interests was "*the need to establish estimates of recreational harvest*". The report went on to say:[8]

> The major difficulty in the past in adequately taking account of recreational and traditional catches has been collecting information on traditional and recreational harvests. This information is important for policy making in general, but is vital for some species such as snapper and paua, which are important for recreational as well as traditional and commercial fishers.

d. In 1994, in the context of work undertaken by officials on new fisheries legislation (which eventually became the Fisheries Act 1996), a report to an Official Steering Committee on "Allocation of TAC and Priority of Fishery Stakeholders" stated:

> Sustainable use of the fisheries is dependent on the aggregate catch of all stakeholders not exceeding the TAC. To this end it is important to monitor recreational and Maori take. This information is important to ensure that total catch does not exceed the TAC, (this information is necessary even if the adjustment to catch levels is borne solely by the commercial sector). Also, a major barrier to providing an explicit share for non-commercial fishers has been the lack of information upon which to base the recreational and traditional Maori take. The Ministry of Agriculture and Fisheries is currently conducting a major survey to, among other things, more accurately quantify the non-commercial take. Consideration needs to be given to ways of collecting this information on a regular basis.

e. In 2005, 13 years after the Task Force Report, the government released its Shared Fisheries Proposals. Nothing had changed. The policy documents continued to acknowledge that such information is the critical first step in fisheries management, but also admitted that governments' attempts to get this information had produced grossly unreliable results:[9]

> Accurate and reliable information on catch is fundamental for effective fisheries management. Reporting requirements exist for commercial and some components of customary take, however information on recreational take is obtained through surveys. This information is expensive to obtain and of variable quality. Efforts made since the early 1990s to assess the participation rates for recreational fishing, and the resulting catch of the main species, have resulted in estimates of catch and participation that vary considerably. Recent funding for recreational fishing surveys is enhancing information. However it is essential that further consideration be given

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[8] See page 49 of Task Force Report (1992).

[9] MFish advice to the Minister dated 16 December 2005 *Shared Fisheries Policy Development*, para 27.

> to tools and investment to improve the reliability, timeliness, and cost-effectiveness of information on recreational participation and harvest.

f. The Shared Fisheries Proposals did not result in any substantive policy or legislative change.

g. Nor did the judicial challenges to the Crown's management of both the northern snapper and kahawai fisheries, result in any meaningful change in approach by the government of the day or even reference to the requirements of those judgments in the operational policy advice provided to government in the context of decisions similar to the present SNA7 management review.

Key findings from the Snapper *and* Kahawai *proceedings*

25. In the *Snapper* case, the High Court held it was implicit, both legally and as a matter of common sense to impose controls on recreational fishers under the Act:[10]

> The Minister can, and should, consider the possibility of additional controls upon recreational fishing also. In addition, there is room for common sense. There will be no point in restricting TACC for conservation purposes if the commercial catch so conserved simply disappears upwards on recreational hooks. There would be no conservation gain. I am satisfied that when Parliament empowered the Minister to reduce the TACC for conservation purposes – not to improve recreational catch rate, but for conservation purposes – it expected the Minister to take any concurrent steps necessary to minimise sabotage by recreational fishing. … Alternatively, … the Minister is not to adopt policies calculated to frustrate the conservation purposes of the Act. Alternatively again, the obligation can be characterised as a Wednesbury rationality point; preventing the Minister from blowing hot and cold. … The significant point is that both law and common sense dictate that a Minister should not reduce the TACC for conservation reasons unless able to take, and taking, reasonable steps to avoid the reduction being rendered futile through increased recreational

26. Ten years on, the Court was faced with similar criticism of the Crown's inaction in the context of the management of the recreational catch in the kahawai fishery. The High Court readily acknowledged the obligations on the Minister:[11]

> There is no doubt that the Minister must do everything possible, within the constraints of the Ministry's resources, to monitor recreational catches of kahawai and employ improved information gathering techniques for the recreational fishery. The Minister said so himself, on two occasions. MFish advice was to the same effect. It is reinforced by Mr Scott's emphasis on the fact that recreational fishers have access to over 50% of the kahawai stocks.

27. The Supreme Court did not ultimately focus on this issue, but did emphasise that the Minister has the power to control and therefore constrain the recreational catch to its allocated share of the TAC. The Court said:[12]

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[10] *New Zealand Federation of Commercial Fishermen Inc v Minister of Fisheries* HC Wellington CP237/95, 24 April 1997 [*HC Snapper*] at 101–102.

[11] *The New Zealand Recreational Fishing Council Inc v Minister of Fisheries* HC Auckland CIV-2005-404-4495, 21 March 2007 at [141].

[12] *SC Kahawai*, at [56].

> Although what the Minister allows for is an estimate of what recreational interests will catch, it is an estimate of a catch which the Minister is able to control. The Minister is, for example, able to impose bag and fish length limits. The allowance accordingly represents what the Minister considers recreational interests should be able to catch but also all that they will be able to catch. ***The Act envisages that the relevant powers will be exercised as necessary to achieve that goal***. The allowance is an estimate and an allocation of part of the total allowable catch in that way.

28. These decisions establish:

    a. Having allocated a share of the TAC to the recreational sector, the Minister needs to use the powers available under the Act to: (a) constrain the recreational sector to that share; and (b) monitor the recreational catch to know whether this is occurring or not.

    b. In making these decisions, the Minister must act reasonably (rationally). The Minister cannot say one thing but by his actions (or inaction) allow another to occur (or as the Court said "blowing hot and cold") or allowing management decisions to be sabotaged by an increase in recreational catch.

Concerns with SNA7 Discussion Paper

29. In the SNA7 Discussion Paper there is an absence of compelling evidence on which to justify the reallocation and the proposal undermines the objectives of the Act and fails to meet the legal requirements outlined by successive courts. The Discussion Paper represents a continuation of the Ministry's abject failure to monitor and constrain the recreational catch in recent years at least.

30. There is nothing unreasonable about recreational fishers seeking an increase in their allowance as the fishery is rebuilt. However, what is inadequate is the monitoring and controls being put in place to ensure this occurs in an appropriate way. The Discussion Paper:

    a. records that the recreational catch is likely to have tripled in the space of four or five years (since the last estimate in 2011/2012);

    b. acknowledges the recreational catch is now likely to be in the order of 50 per cent of the total catch;

    c. considers that the proposed allowance of 250 tonnes under option 2 (an increase from 90 tonnes) better reflects what recreational fishers are currently actually taking;

    d. assumes the recreational catch increases proportionally with biomass;

    e. assumes the biomass will continue to increase as the fishery returns to a stock level that will produce maximal yields; and

f. indicates that public resources are being deployed to estimate the recreational catch using aerial overflights, boat ramp interviews, and web-based ramp cameras but these results will not be available until after March 2017.

31. Despite this, the Discussion Paper:

    a. fails to acknowledge or even refer to the Crown's obligations to constrain the recreational fishery to its allocated share of the TAC;

    b. continues to acknowledge that the Ministry does not have reliable estimates of recreational catch (and, as usual, that more data is currently being obtained and will be available shortly); and

    c. states that in the meantime no further controls are proposed on recreational catch (which are currently a daily bag limit of 10, except for a sub-limit of three in the Marlborough Sounds, and an MLS of 25 cm) – but that they will be looked at in the future.

32. This is a surprising and disappointing statement when MPI have clearly failed to manage the recreational catch for the past decade or longer. One would think addressing this mismanagement would be a priority, not perpetuating it.

33. Recreational fishers are already estimated to be catching their revised allowance (250 tonnes), there has been a massive (300%) increase in the recreational catch in the past five years, where the biomass is expected to increase further, and there has been no suggestion that the current bag limits are operating as any real constrain on the recreational catch. In these circumstances it is irrational and irresponsible for MPI not to be imposing further immediate management measures on the recreational catch to ensure it remains within the proposed allowance.

Conclusion

34. While it legally open to the Minister to reallocate the TAC, so as to move from a 70/30 split to a 50/50 split between commercial and recreational use, to do so has serious implications for the long-term integrity of the QMS. If this is to occur it is critical that it is done in a reasoned and transparent manner that does not undermine (a) the commercial fishers' incentives to continue to invest in, nurture and protect the fishery; or (b) the commercial fishers' quota rights and expectations.

35. In making decisions about the allocation of the TAC between various sectors the Minister must therefore take into account the impact of any such decision on the QMS and be transparent about the reason for the decision. The rationale offered in the Discussion Paper for this reallocation is fairly light on analysis and is essentially that recreational catch has been held down through the historically depleted state of the fishery and that the proposed allocation of an equal proportion reflects current recreational catch in light of the current higher yields and biomass. There is no discussion in the Paper about the impact this reallocation has on the QMS, and no indication that the Minister has properly considered the significant likely impact of shifting the allocation so dramatically.

36. The increased allocation for customary Māori take seems to ignore the best available information as to the likely level of customary utilisation. There seems no rational basis for believing that allowance (albeit small) will be utilised and in that sense it has the effect of setting aside part of the TAC and preventing it from being taken. Put another way, given the need for the total TAC to be allocated, this yield should properly form part of the TACC.

37. MPI has stood back and allowed the recreational catches to significantly exceed the allowances made for them (90 tonnes when the TAC was last set). In light of this recreational over-catch, MPI now proposes to simply increase the recreational allowance and in the process to deny the commercial industry a share of the increased abundance. This improvement in the fishery is due to good commercial management and the significant sustainability actions that the commercial fishery takes. However these gains are being lost to recreational hooks. MPI must dramatically and immediately improve the way that it manages the recreational fishery to make sure that recreational catch is held at the levels allocated to it, and that the sustainability gains in the SNA7 fishery are not lost.

APPENDIX 3

IN-SEASON MODELS FOR FLATFISH (FLA 3) AND RED COD (RCO 3) AND REVIEW OF SUSTAINABILTY CONTROLS

FLATFISH (FLA3)

1. In the 2007-08 fishing year, the TAC for FLA 3 was cut from 2,893 tonnes to 1,617 tonnes. The then Minister of Fisheries noted that the annual variability of flatfish abundance and that FLA 3 is on Schedule 2 to the Act. He directed that research be undertaken to develop an in-season increase management procedure by which in-season adjustments could be made to the TAC.

2. The MPI Southern Inshore Working Group (SINS WG) accepted a CPUE analysis intended to inform in-season adjustments to the FLA 3 TACC. This analysis estimated trends for three species (NZ sole, sand flounder and lemon sole) and aggregated catch landed to FLA.

3. These trends are used to evaluate the relative status of these species and to predict in-season abundance of FLA based on early harvest returns to the fishery.

4. The in-season model has been run each year since 2009 and with three TACC increases (see Table 2) to the TACC applied with another proposed for this current 2015-16 fishing year.

Table 1. Landings and use of the in-season model for FLA 3

FLA 3 (FMAs 3,4,5&6)			
Fishing Year	**TACC (t)**	**Actual Landings (t)**	**In-season model TACC increase amounts (t)**
2007-08	1430	1365	
2008-09	1430**	1544	+ 350
2009-10	1430**	1525	+ 333
2010-11	1430	1027	
2011-12	1430	1507	
2012-13	1430**	1512	+ 297
2013-14	1430	1377	
2014-15	1430	1231	
2015-16	1430**	1622	+220 proposed
2016-17	1430**	1421	+635 proposed
2017-18	1430	886	

**The TACC was increased in-season under Schedule 2 of the Fisheries Act 1996

5. It was agreed that the in-season model would be reviewed after the first five years and that was completed in 2015 with the decision to maintain the use of the model. The latest results, post model review, are shown in Table 2.

Table 2. Results of the operation of the RCO3 MP by prediction year.

Prediction Year	Fishing year	CPUE Prediction	CPUE Total year[1]	Calculated TACC	%"error"
2016	2015-16	0.984	1.048	1,650	-6%
2017	2016-17	1.215	0.978	2,065	-24%
2018	2017-18	0.870	-	1,461	-

1 calculated in the year following

FLA 3 Fishery

6. Much of the catch in FLA 3 is targeted (between 85% and 97%). Around 95% of targeted FLA 3 landings are taken by bottom trawl, 3% is taken by set net and less than 1% by Danish Seine.

7. Some flatfish species are fast-growing and short-lived, generally only surviving to 3-4 years of age, with very few reaching 5-6 years, others such as brill and turbot are longer lived, reaching a maximum age of 21 years and 16 years, respectively. These figures are approximates and are yet to be validated.

8. Juveniles congregate in sheltered inshore waters, e.g., estuarine areas, shallow mudflats and sandflats, where they remain for up to two years. Juvenile survival is highly variable. Flatfish move offshore for first spawning at 2-3 years of age during winter and spring. Adult mortality is high, with many flatfish spawning only once and few spawning more than two or three times. However, fecundity is high, e.g., from 0.2 million eggs to over 1 million eggs in sand flounders.

Table 2. Proposed TAC, TACC and allowance options for FLA 3

	Allowances				
Situation	**TAC (t)**	**TACC (t)**	**Customary Maori (t)**	**Recreational (t)**	**Other sources of fishing-related mortality (t)**
Current	1617	1430	5	150	32
SIF Proposal	1787	1600 static	5	150	32

Management Approach and Proposed Sustainability Review

9. Southern Inshore submit that whilst the capacity to obtain in-season increases to TACCs is an appropriate adaptive management approach. There are also problems associated with the current decision-making timeframe by MPI. Final decisions are made and applied far too late in the current year, missing most of the seasonal access to the fishery. As a consequence, the process does not suit the seasonal nature or forward catch planning needs by fishers.

10. The decision-making process does not remain with the MPI fisheries manager or working group. The process is:
    a. SINS WG review the model run analyses presented by the service provider and approve or reject the decision rule;
    b. MPI draft and present paper for public consultation;
    c. MPI summarise submissions and provide final advice paper to the Minister;
    d. Minister submits the paper to Cabinet for final decision;
    e. Gazette notice issued; and
    f. ACE allocated to ACE holders. (generally late August/September)

11. The extensive decision-making process should not be needed since the in-season model framework has already been signed off by the Minister in the first year. The process uses valuable fisheries management resources that could otherwise be used to assess other fisheries. Any subsequent use of the model should therefore be automatic and signed off by the SINS WG but only if there are changes to the model, otherwise the fisheries

managers should simply input information into the model for calculation. Any minor changes to the model (such as the number of months used in the model) should not require the Minister to sign-off the model outcome; it is a technical science decision. The SINS WG is made up of independent or MPI expert fisheries scientists and MPI fisheries managers. If the public are interested in the technical basis for the model then they should come to the meetings.

12. Southern Inshore request that the TACC for FLA 3 be increased to 1600 t with the option of using the in-season model. This would provide fishers with additional quota in the range that the fishery can sustain but allow for the model to increase the TACC further in those years where abundance is prevalent. This is a short-lived species and very cyclical so the model is still advantageous. There does however need to be better certainty to additional ACE from an increase to the TACC to 1600t.

13. If the in-season model is to be used continually after this TACC increase then the decision-making process needs to be refined to allow for the increased TACC to be in place at least 2-3 weeks after the SINS WG, not the current 3-4 months. We cannot advise fishers that a TACC increase has been proposed by the SINS WG when it can still be potentially overturned by the Minster/Cabinet. An overcatch and deemed value situation would be very problematic and less than desirable process.

RED COD (RCO3)

1. The MPI Southern Inshore Working Group (SINS WG) accepted a CPUE analysis intended to inform in-season adjustments to the RCO 3 TACC.

2. The issues identified from running the in-season model for RCO 3 mirror those noted for FLA3. Table 1 provides the history of the landings since 2007-08, when the TACC was substantially decreased, and the years when the TACC was increased under the in-season model. The influence of the delay in notifying the increased TACC for 2014-15 had an influence that year, as did the fishers moving to target other fisheries that were showing up in large abundance. RCO does not offer the same economic returns as GUR etc.

3. The in-season model has been run each year since 2012-13 with two TACC increases (see Table 1) with the results of the management procedure results shown in Table 2. In 2015 the model proposed a TACC level approximately twice the current TACC. By the time MPI fisheries managers got around to drafting the gazette notice they reviewed the total catch to date and surmised that the projected new TACC would not be caught and therefore pulled the decision to apply the increased TACC for that in-season year. The delay in decision making greatly influences the catching profiles by fishers so as not to incur catch overruns for that year. Firstly, increasing the TACC in this manner is not appropriate as the model needs to run the course and where applicable apply the increased TACC, and secondly, the delay in the decision-making process influences fishers decisions on whether there will be additional ACE available for their catch planning purposes or whether they need to target other species for economic returns.

Table 1. Landings from 2007-08 when the TACC was reduced

RCO 3 (FMAs 3,4,5&6)			
Fishing Year	**TACC (t)**	**Actual Landings (t)**	**In-season model TACC increase amounts (t)**
2007-08	4600	3236	
2008-09	4600	2542	
2009-10	4600	2994	

2010-11	4600	4567	
2011-12	4600	5389	
2012-13	4600**	5294	+344
2013-14	4600**	4410	+791
2014-15	4600	2171	
2015-16	4600**	3837	No increase
2016-17	4600	4543	
2017-18	4600	2250	Increase proposed but agreed resources best used for other stocks

**The TACC was increased in-season under Schedule 2 of the Fisheries Act 1996

Table 2. Results of the operation of the RCO3 MP by prediction year.

Prediction Year	Fishing year	CPUE Prediction	CPUE Total year[1]	Calculated TACC	%"error"
2015	2014-15	1.1948	0.8112	6,289	47%
2016	2015-16	0.4838	0.7112	2,405	-32%
2017	2016-17	0.8480	1.1489	4,291	-26%
2018	2017-18	1.7055	-	8,912	-

1 calculated in the year following

RCO3 Fishery

4. Red cod are relatively fast-growing, short-lived species, resulting in highly variable recruitment to the stock. Due to such variable recruitment abundance and catches between years can fluctuate.

5. Red cod enter the fishery at approximately two years of age and few fish older than six years remain in the commercial fishery. This means that pulses of strong recruitment produce periodic bulges of higher biomass moving through the fishery.

6. Most of the catch in RCO 3 is caught as a target catch by trawling and as a bycatch of other target species: barracoota (16%), tarakihi (6%) and flatfish (4%). About 95% of targeted RCO 3 landings is taken by bottom trawl, the remaining 5% is taken by Danish seine, midwater trawl and set net. Peak catches in the trawl fishery occur in summer to early autumn for most of RCO 3.

7. The red cod fishery is characterised by large variations in catches between years, both within and among seasons. Research indicates that this inter-annual variation in catch is due to varied recruitment causing biomass fluctuations rather than a change in catchability.

8. The CPUE index is generally considered to be a good indicator of in-season RCO 3 abundance and which has been increasing since 2000. This is supported by the increasing biomass estimates from the east coast South Island trawl survey.

Table 3. Proposed TAC, TACC and allowance options for RCO 3

			Allowances		
Situation	**TAC (t)**	**TACC (t)**	**Customary Maori (t)**	**Recreational (t)**	**Other sources of fishing-related mortality (t)**
Current	4930	4600	5	95	230
SIF Proposal	5830	5500 static	5	95	230

MANAGEMENT APPROACH AND PROPOSED SUSTAINABILITY REVIEW

14. Southern Inshore submit that whilst the capacity to obtain in-season increases to TACCs is an appropriate adaptive management approach it does not however suit the seasonal nature or forward catch planning needs of fishers. There are also problems associated with the current decision-making timeframe by MPI. Final decisions are made and applied far too late in the current year, missing most of the seasonal access to the fishery.

15. The decision-making process does not remain with the MPI fisheries manager or working group. The process is:
    g. SINS WG review the model run analyses presented by the service provider and approve or reject the decision rule;
    h. MPI draft and present paper for public consultation;
    i. MPI summarise submissions and provide final advice paper to the Minister;
    j. Minister submits the paper to Cabinet for final decision;
    k. Gazette notice issued after 28 stand-down period before enacted; and
    l. ACE allocated to ACE holders. (as late as August/September)

16. The extended decision-making process should not be in place since the in-season model framework has already been signed off by the Minister. The process uses valuable fisheries management resources that could otherwise be used to assess other fisheries. Any subsequent use of the model should therefore be automatic and signed off by the SINS WG. Any minor changes to the model (such as the number of months used in the model) should not then require the Minister to sign-off, it is a technical science decision. The SINS WG is made up of independent or MPI expert fisheries scientists and MPI fisheries managers. If the public are interested in the technical basis for the model then they should come to the meetings.

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IN THE MATTER OF: **REVIEW OF SUSTAINABILITY MEASURES FOR TARAKIHI (TAR 1, 2, 3 & 7) FOR 2019/2020**

SUBMISSION OF SPEARFISHING NEW ZEALAND INCORPORATED

About the Submitter

Spearfishing New Zealand (SNZ) is an Incorporated Society. The committee is authorised by our constitution to represent the interests of freedive spearfishers in New Zealand. We support initiatives that we consider are beneficial to our members and will contribute to rebuilding fisheries to a healthy level that will support better utilisation of the resource.

SNZ reports directly to approximately 5,000 divers nationwide. The wider freedive spearfishing community is approximated by the 15,290 members of the most active (NZ) social media pages in our sport.

Importance of TAR Fishery

Freedive spearfishers are very active in **TAR 1 – 3 (all coastal areas)**. Tarakihi are prized fish for freedive spearfishers due to the challenging depths they are found at (most commonly deeper than 20 metres) and their exceptional eating qualities. For these reasons they are a very important species for us in general recreational diving, where they would potentially be an intended target species on at least 50% of days out for many of our members, and in all competitive events which are usually specifically held in areas where these species can be found. Changes in fish stock abundance for these species will have a direct impact on our group in terms of sustenance, recreational value, and competitive differentiation.

In our 2018 submission on this fishery dated 6 July 2018 we supported the moderated cuts similar to those adopted by the Minster. We defended the minster's decision publicly in online forums, by showing how the staged cuts were very close to what we had supported – assuming they proceed as planned. We consider the other recreational groups unfairly maligned the adjustments made at that time.

Current Management Options

We **support Option 2** because the projected rebuild of 11 years is the closest to 40% SB_0 which is required by the HSS. This is a simple change and it is how the HSS and the Fisheries Act are supposed to work.

We specifically **oppose Option 3** proposed by the industry because:

1. It is not time-constrained, as required by the HSS.
2. The industry's target 35% SB_0 remains unsubstantiated.
3. The minster would fail to meet his obligations to manage the fishery appropriately if this option is adopted.
4. It is based on making adjustments using science and catch modification methods that are yet to be proven.
5. Industry had plenty of warning on this one, given the signalled intent last year, and were even afforded a soft start by moderating the necessary cuts in the first year. They have not managed to compile a compliant proposal.
6. The plan unsurprisingly proposes no catch reduction - it is just another 'delay' proposal when cuts are urgently needed.

We thank Fisheries NZ for the opportunity to submit on these important issues, and look forward to assisting in future decision making that affects our members.

Kind Regards,

[redacted]

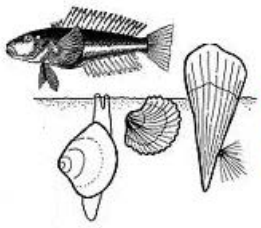
Spearfishing New Zealand
25 July 2019

Contact details:

[redacted]

[redacted]

Phone: [redacted]



SPECIALTY & EMERGING FISHERIES

[redacted] [redacted]

Sustainability Review 2019
Fisheries Management
Ministry for Primary Industries
P O Box 2526
Wellington 6011.

23rd July 2019

Emailed to: FMsubmissions@mpi.govt.nz

Re: Sustainability Review 2019, Fisheries New Zealand, Ministry for Primary Industries, PO Box 2526, Wellington 6140.

Submission on: Review of Sustainability Measures for Kina (SUR 1A, SUR 1B) for 2019/20

This submission is made on behalf of the Specialty and Emerging Fisheries Group (S&EF). S&EF Group is a representative collective of commercial fishing associations operating mainly niche fisheries and markets and represents approximately $140 million in annual economic return. The contact person is [redacted] email [redacted] phone [redacted]. Should a hearing be held on this issue, then the submitter would like to be heard.

S&EF Group supports the submission from the Kina Industry Council (KIC) and agrees with all points made in their submission. This submission should be read in conjunction with this other submission, as we agree with all points made in the KIC submission but do not in general repeat all points raised in that submission.

Proposal for SUR 1 A and SUR 1 B: S&EF Group supports either:

- Option 2 - a 20% increase to the TAC, TACC and allowances, <u>on condition of a full review of SUR 1A and SUR 1B within 2 years, taking into account fine scale data received from the digital monitoring programme</u>

Or;

- Option 3- a 50% increase to the TAC, TACC and allowances.

Secretary: [redacted]. Ph [redacted]
em: [redacted]

Please note that S&EF's preference for Option 2 differs slightly to that outlined in the Consultation Document, as it is conditional upon a review of these two stocks within 2 years of the activation of the 20% increase in TACC's.

Either of the above two options are satisfactory to S&EF.

The reason for this is because S&EF Group supports sustainable fisheries management based on robust and transparent science. In the case of these two areas (SUR 1A and SUR 1B), the CPUE and associated information on kina barrens has shown that the proposed TACC increases are justified, and it is likely that these increases will be sustainable. For Option 2, a scientific review after 2 years would be necessary to assess whether the TAC and TACC in these two areas could be increased further.

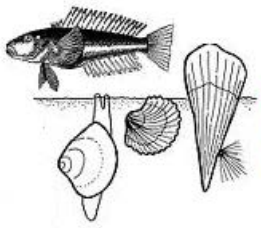
Yours faithfully

[redacted]

[redacted]

SPECIALTY & EMERGING FISHERIES GROUP

Secretary: [redacted] Ph [redacted];
em: [redacted]



SPECIALTY & EMERGING FISHERIES

[redacted]

Ph [redacted]
Email [redacted]

Sustainability Review 2019
Fisheries Management
Ministry for Primary Industries
P O Box 2526
Wellington 6011.

23rd July 2019

Emailed to: FMsubmissions@mpi.govt.nz

Re: Sustainability Review 2019, Fisheries New Zealand, Ministry for Primary Industries, PO Box 2526, Wellington 6140.

Submission on: Reporting requirements for Amateur-fishing charter vessel operators. Fisheries New Zealand Discussion Paper No: 2019/15

This submission is made on behalf of the Specialty and Emerging Fisheries Group (S&EF). S&EF Group is a representative collective of commercial fishing associations operating mainly niche fisheries and markets and represents approximately $140 million in annual economic return. The contact person is [redacted] email [redacted] phone [redacted] Should a hearing be held on this issue, then the submitter would like to be heard.

S&EF Group supports the submission from the BCO5 Association (BCO5) and agrees with all points made in their submission. In response to the questions asked, S&EF can provide the following answers:

Do you agree with proposals to report the catch of additional species? If not why not?

S&EF agrees with the proposals outlined in the Discussion Paper.

Do you think there are there any additional species for which catch should be reported?

Yes. There might be a need to report other quota and non-quota species, depending on the Fisheries Management Area.

Do you agree with proposals to report the landed weight for species whose catch must be reported? If not why not?

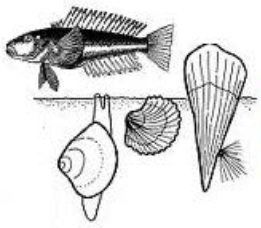
S&EF agrees with the proposals to report landed weight as outlined in the Discussion Paper.

Yours faithfully

[redacted]

[redacted]

SPECIALTY & EMERGING FISHERIES GROUP



SPECIALTY & EMERGING FISHERIES

[redacted] [redacted]

Sustainability Review 2019
Fisheries Management
Ministry for Primary Industries
P O Box 2526
Wellington 6011.

26th July 2019

Emailed to: FMsubmissions@mpi.govt.nz

Re: Sustainability Review 2019, Fisheries New Zealand, Ministry for Primary Industries, PO Box 2526, Wellington 6140.

Submission on: Review of Sustainability Measures for Pāua (PAU 4) for 2019/20Fisheries New Zealand Discussion Paper No: 2019/09

This submission is made on behalf of the Specialty and Emerging Fisheries Group (S&EF). S&EF Group is a representative collective of commercial fishing associations operating mainly niche fisheries and markets and represents approximately $140 million in annual economic return. The contact person is [redacted] email [redacted] phone [redacted] Should a hearing be held on this issue, then the submitter would like to be heard.

S&EF Group supports the submission and subsequent decisions of the PAUAMAC 4 Industry Association Incorporated. S&EF agrees with all points made in their submission.

The reason for this is because S&EF Group supports sustainable fisheries management based on comprehensive Fisheries Plans and robust science. In the case of PAU4 both of these criteria are fulfilled. This is reflected in the submission of PAUAMAC 4, hence it is supported by S&EF.

Yours faithfully

[redacted]

[redacted]

SPECIALTY & EMERGING FISHERIES GROUP

Secretary: [redacted] Ph [redacted]
em: [redacted]

From: [redacted]
To: FMSubmissions
Subject: Submission TAR
Date: Friday, 26 July 2019 5:01:36 PM
Attachments: image001.jpg
Fisheries-NZ-Oct-sustainability-round-2019-Submission-Form-Word.docx

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As attached see our submission for TAR options in latest submission round.
Kind regards

[redacted]
[redacted]
star fish logo

Star Fish Supply Limited
LFR:8640051
27 Dunlop Road, Onekawa, Napier 4110
PO Box 12028, Ahuriri, Napier 4144
T: [redacted] | m: [redacted]
E: [redacted] | W: www.starfoods.co.nz

Submission Form

1 October 2019 Sustainability Round Consultation

Fisheries New Zealand
Tini a Tangaroa

Once you have completed this form

Email to: FMsubmissions@mpi.govt.nz

While we prefer email, you can also post your submission to: Fisheries Management, Fisheries New Zealand, PO Box 2526, Wellington 6140, New Zealand.

Submissions must be received no later than 5pm, Friday 26 July 2019.

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

Submitter details:

Name of submitter or contact person:	[redacted]
Organisation (if applicable):	Star Fish Supply Limited
Email:	[redacted]
Fish stock(s) this submission refers to:	TAR2
Your preferred option as detailed in consultation document (write "other" if you do not agree with any of the options presented):	Option 3

Official Information Act 1982

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

Star Fish Supply Limited is an Area 2 inshore quota owner, vessel operator, with an on-site factor, other small vessel operators landing to our company and wholesale distribution within Hawke's Bay, the company has been owned by the [redacted] since 1964 and has a rich history within the fishing industry and local community and also comes within the small business category.

For us as a company the best case scenario if TAR2 Option1 or 2 are implemented and cuts are put in place it may not mean a loss of jobs, but it would mean a huge increase in the cost and selling price of TAR which would take this staple out of reach of many families purchasing this for meals and out of the reach of most local fish n chips shops, restaurants, fish mongers, & supermarkets etc due to the massive increase in costs which all these industries are already struggling with on a day to day basis, this could mean these various small businesses do in fact close. This has a huge flow on effect within the region.

For other fishermen it will mean they will no longer find value in their catch with the huge Deemed Value costs, causing them to sell their vessels – with no buyers readily wishing to join the industry who will buy these? The industry is having a hard enough time recruiting young workers, the Skippers of vessels are ageing and most will simply retire. These are all small business owners, with less vessels in the area a lot of industrial trade (engineers, electricians, etc) will also lose regular work based on these vessels. There is a massive flow-on effect from both Option 1 & 2.

How does the possibility of business closures and regional job losses within the industry sit with Minister Stuart Nash? As this affects his other portfolios directly, namely Small Business, Revenue and even his electorate of Napier. With the loss of jobs and careers this also brings in the effects of mental health on an industry which is already struggling, a core focus of the coalition Government is the improvement of mental health of New Zealanders. Another factor to consider is the health and safety risk, with cuts to TAR2 through Option1 & 2 vessels are forced to fish out deeper, meaning longer trips on vessels that in Area 2 are not really built for this type of deep sea fishing – deeper, longer trips, which can also lead to fatigue issues with skippers and crew and higher risk of accidents.

The cuts last quota year (2018/19) have not been proven or researched as to the current effectiveness so far, in one year how has the cuts improved the stocks? What is the justification behind Option1 & 2 (more cuts), if no research has gone into the current cuts and how this has potentially improved the fish stocks already. Shouldn't this be aligned with the 2020/21 research projects?

There is constant talk about the need for the science and proven research with fish stocks, but FNZ are basing these cuts on absolutely no updated science or research results.

After attending the consultation meeting in Napier on Friday 12th July 2019 we were deeply concerned with the Ministers comments regarding lack of innovation with Option 3 really disappointing and frankly almost insulting, the amount of work that has gone into the TAR2 mitigation and sustainability option put forward has been impressive, parts of this opens the way for more research on the TAR2 breeding grounds including identifying the nursery areas within Area2. It is not just a change in mesh sizes, it is a change in panels on nets allowing fish to escape through other methods, it is closures to KNOWN TAR2 nursery grounds, it is more voluntary reporting to FNZ of TAR2 stocks in order for these to be analysed, it is move on rules to avoid small TAR2 stocks and it is a closer working relationship between Area2 quota holders and fishers who are wanting to work towards the sustainability of stocks AND our livelihoods!

There were further items which had been agreed, and adhered to within the TAR2 fishery – namely identifying undersize TAR2 returned to sea, a special species code TAX was set up to be used on Trawl Catch Effort Report(TCER) books, this was to be recorded on EVERY shot, even if the result was 0kg. The results were to be periodically passed on to FINZ for analysis. Since changing to Electronic Reporting this option is no longer available, yes TAR disposal for under minimum size is still available to select, but you

CANNOT select 0kg (we are using Deckhand – the software which is probably the preferred option within the industry since FishServe is the lead support for this software and hardware) or when reporting this directly via FishServe. This already undermines agreements put in place between FINZ members and FNZ and again leads to a further lack of science and research able to be analysed.

Nine other species were put forward for review within Area 2 for 2019/20, to date not one of these species received approval for increases or research, as quota owners and represented by FINZ (Fisheries Inshore New Zealand) we have yet to receive any official communication from Fisheries New Zealand regarding this other than unofficial conversations from our local Fisheries New Zealand staff ([redacted]) and discussions with [redacted] our Area 2 representative in Wellington at the consultation meeting. A prime example is SKI2 which was put forward for review, this was historically cut with other areas a few years back. Local fishermen requested this species be looked at urgently, much like TAR2 this species is being found in various depths so is increasingly more difficult to avoid and the abundance of this species is causing a choke effect on catching other species, the Deemed Value of SKI2 is also disproportionate to other SKI area Deemed Values, why are SKI3 and SKI7 being reviewed but nothing approved for SKI2 – this all leads back to further issues within area 2 fisheries.

I mentioned the disconnect between our local Fisheries New Zealand staff in Hawke's Bay and the strong relationship we've built within the local fishing industry with the staff of FNZ here, and the absolute lack of any relationship with the Wellington staff of Fisheries New Zealand – only just discovering at the consultation meeting we even had an Area 2 management staff within the Wellington team!

The continued requests for research and science is such a huge issue which seems to remain unable to get anywhere within FNZ, when we've requested reviews of species the answer back is a lack of resources doesn't seem to wash with industry. A prime example being Rick Burch and his vessel Nancy Glen II, going to the effort of gathering costings, proposals for research which has been encouraged by local Hawke's Bay staff, being encouraged by the Minister and advised of available funding. Then submitting the proposed research (for net trials, which brings us back to the innovation you want from the industry) only to be declined as too expensive – what is the point of the industry trying to innovate and work out better methods of fishing when Fisheries New Zealand won't even support this research.

We urge you to consider Option 3 as the best option for industry until such time as there is more science available to prove or disprove initial cuts made to TAR2 in 2018/19.

Please continue on a separate sheet if required.

From:	[redacted]
To:	snash@ministers.govt.nz
Cc:	FMSubmissions
Subject:	Te Ohu Kaimoana Sustainability Round Response October 2019
Date:	Friday, 26 July 2019 5:05:41 PM
Attachments:	Te Ohu Kaimoana Sustainability Round Response October 2019.pdf Cover Letter.pdf

Tena koe

Please find attached a cover letter and response to the 2019/20 sustainability round review on behalf of Te Ohu Kaimoana.

Nga mihi

[redacted]

[redacted] (Fisheries & Aquaculture)

PO Box 3277, Level 4, Woolstore Professional Centre,
158 The Terrace, Wellington, New Zealand

P: [redacted] M: [redacted] W: teohu.maori.nz

Te Ohu Kaimoana

26 July 2019

Hon Stuart Nash
PARLIAMENT BUILDING

Email: snash@ministers.govt.nz

Tēnā koe e te Minita,

Te Ohu Kaimoana's response to the 2019/20 Sustainability Round Review

Thank you for this opportunity to provide a response on the Fisheries New Zealand (FNZ) Review of Sustainability Measures to take effect on 1 October 2019. Our response is shaped by the collective aspirations of Iwi for fisheries management and leadership in Aotearoa.

We appreciated the increased engagement as part of this year's round and see it as a step toward a more meaningful and cooperative relationship. We welcome the opportunity to meet to meet and discuss our positions for this year's review with you and/or relevant officials.

Noho ora mai rā,

[redacted]

[redacted]

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Te Ohu Kaimoana's response to Fisheries New Zealand's review of Sustainability measures for 1 October 2019

Te Ohu Kaimoana

Contents

This is our response to this year's sustainability review

1. This paper contains our response to Fisheries New Zealand's proposals on the review of sustainability measures for the 2019/20 fishing year. Fisheries New Zealand released its Initial Position Paper on 18 June 2019. Final responses are due on 26 July 2019.

2. Our response is structured as follows:
    - First, we set out who we are and the reasons for our interest in the Initial Position Paper.
    - Second, we describe *Te Hā o Tangaroa kia ora ai tāua* as the foundation of our fisheries management principles.
    - Third, we identify how fisheries management should be consistent with the Māori Fisheries Deed of Settlement[1].
    - Fourth, based on the above, we set out our preferred approach to managing the fish stocks under review.

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

1.0 We are Te Ohu Kaimoana

4. Te Ohu Kai Moana Trustee Ltd (Te Ohu Kaimoana) was established to implement and protect the Deed of Settlement. Our purpose, set out in section 32 of the Māori Fisheries Act 2004, is to "advance the interests of Iwi, individually and collectively, primarily in the development of fisheries, fishing and fisheries-related activities, in order to:

    - ultimately benefit the members of Iwi and Māori generally
    - further the agreements made in the Deed of Settlement
    - assist the Crown to discharge its obligations under the Māori Fisheries Deed of Settlement and Te Tiriti o Waitangi
    - contribute to the achievement of an enduring settlement of the claims and grievances referred to in the Deed of Settlement.

[1] Māori Fisheries Deed of Settlement 1992. The Deed is given effect to by the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.

5. We work on behalf of 58 MIOs[2], who represent Iwi throughout Aotearoa. AHCs hold Māori Fisheries Settlement Assets[3] on behalf of their MIOs. The assets include Individual Transferable Quota (ITQ) and shares in Aotearoa Fisheries Limited which, in turn, owns 50% of the Sealord Group.

6. MIOs have approved our Māori Fisheries Strategy and three-year strategic plan, which has as its goal "that MIOs collectively lead the development of Aotearoa's marine and environmental policy affecting fisheries management through Te Ohu Kaimoana as their mandated agent". We play a key role in assisting MIOs to achieve that goal.

7. MIOs expect us to protect and enhance the Māori Fisheries Settlement by providing them with policy advice on fisheries-related issues. Iwi have identified the biannual review of sustainability measures as critically important to their long-term relationship with Tangaroa.

2.0 Te Hā o Tangaroa kia ora ai tāua is the foundation of our fisheries management principles

The significance of Tangaroa to Te Ao Māori

8. Before colonisation by the Crown, Māori enjoyed full exclusive, undisturbed possession and tino rangatiratanga of their fisheries. The relationship Māori have with Tangaroa is intrinsic, and the ability to benefit from that relationship was and continues to be underpinned by whakapapa. Tangaroa is the son of Papatūānuku, the earth mother, and Ranginui, the sky father. When Papatūānuku and Ranginui were separated, Tangaroa went to live in the world that was created and has existed as a tipuna to Māori ever since[4].

9. Te Tiriti o Waitangi guaranteed Māori tino rangatiratanga over their taonga, including fisheries. Tino rangatiratanga is about Māori acting with authority and independence over their own affairs and is practiced through living according to tikanga and mātauranga Māori, and striving wherever possible to ensure that the homes, land, and resources (including fisheries) guaranteed to Māori

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

[3] Māori Fisheries Settlement Assets consistent with the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 and the Māori Fisheries Act 2004

[4] Waitangi Tribunal. "Ko Aotearoa tēnei: A report into claims concerning New Zealand law and policy affecting Māori culture and identity." Te taumata tuatahi (2011).

under Te Tiriti o Waitangi are protected for the use and enjoyment of future generations. This view endures today and *Te Hā o Tangaroa kia ora ai tāua* is an expression of this.

We base our advice on 'Te Hā o Tangaroa kia ora ai tāua'

10. *Te Hā o Tangaroa kia ora ai tāua* (the breath of Tangaroa sustains us) is an expression of a Māori World View. It contains the principles we use to analyse modern fisheries policy, and other policies that may affect the rights of Iwi under the Māori Fisheries Settlement. *Te Hā o Tangaroa kia ora ai tāua* is depicted in Appendix A.

11. In essence, *Te Hā o Tangaroa kia ora ai tāua* highlights the importance of an interdependent relationship with Tangaroa, including his breath, rhythm and bounty, and the way those aspects work together to sustain both Tangaroa and humanity in an enduring way.

12. Protection of the reciprocal relationship with Tangaroa is an inherent part of the Māori Fisheries Settlement agreed by Māori and the Crown in 1992. The Māori Fisheries Settlement is an important and relevant part of modern fisheries management for Aotearoa.

3.0 Fisheries management should be consistent with the Deed of Settlement

13. The Fisheries Act 1996 obliges those performing functions under it to act consistently with the Māori Fisheries Settlement, which is a full and final settlement of Māori claims to fisheries[5]. This means whenever a Minister makes a decision to implement a sustainability measure or to provide for utilisation, they must ensure their decision is consistent with, and does not undermine, the Māori Fisheries Settlement. Our assessment of the stocks being reviewed raises concerns about the following policy matters:
    - 3.1 a constructive relationship with Fisheries New Zealand
    - 3.2 allocating the TAC appropriately
    - 3.3 application of 28N Rights
    - 3.4 options for reducing catch
    - 3.5 determining target stock levels and rebuild rates
    - 3.6 application of Deemed Values.

[5] Specifically, section 5 (b) of the Fisheries Act 1996 obliges "all persons exercising or performing functions, duties, or powers conferred or imposed by or under it" to "act in a manner consistent with the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (TOW(FC)SA)".

3.1 We seek a constructive working relationship with Fisheries New Zealand

14. In the lead up to the review of sustainability measures and other management controls for the 2019/20 fishing year, Fisheries New Zealand staff discussed the proposed stocks with us. Subsequently, Fisheries New Zealand made an independent call on the stocks to be reviewed. As a result, some stocks have been included unnecessarily, while several others should have been included. This situation is highly unsatisfactory.

15. We consider the short six-week consultation period insufficient. We believe that Fisheries New Zealand should have held pre-consultation workshops with Iwi and stakeholders to inform participants and guide future decision-making.

3.2 Changes to the TAC should not undermine the Māori Fisheries Settlement

16. When settling their fisheries claims, Māori expected the value and integrity of their Settlement to be retained. After all, the Settlement is full and final. Any action the Crown takes should not undermine the value of Māori Fisheries Settlement assets or customary non-commercial needs. Consequently, the Minister must ensure the integrity of Māori fishing rights is maintained when adjusting the TAC. This means two things:
    1. Priority should be given to the customary allowance for stocks that Iwi and hapū require to meet their customary non-commercial needs.
    2. The proportion of the TACC that makes up the TAC should not be reduced (but can be increased) by reallocations to the recreational sector. Any reallocation to the recreational sector has the effect of reducing the overall value of Māori Fisheries Settlement quota.

17. We cannot support increases in the recreational allowance at the expense of the TACC. This re-allocation affects the rights of settlement quota holders and reduces the incentives on the commercial sector to take responsibility and invest in good management.

18. To protect Māori Fisheries Settlement rights, the following approach should be taken to adjust the Total Allowable Catch (TAC).
    - The customary allowance is based on customary needs and managed through kaitiaki. In some instances, customary needs may not be fully identified and there may be insufficient capacity to harvest what is needed. Therefore, increases to the customary

allowance can be expected over time as both needs are better identified and capacity to harvest is realised.

- In situations where the abundance of a stock drops, kaitiaki will respond appropriately.
- the recreational allowance should not be increased above the level it was first set by the Minister when the TAC was set for any particular stock.
- If, in order to ensure sustainability, the TAC, Total Allowable Commercial Catch (TACC) and the recreational allowance is reduced, the allowance can only be increased back to its initial level when the stock rebuilds.
- Otherwise, all increases to a TAC should be allocated to the TACC after providing for non-commercial customary fishing and other fisheries-related sources of mortality.

19. In our view, this approach should be adopted as the default. It should apply whether the stock is at, above or below any target stock level at the time the TAC is set. Variations on this approach should only be considered by the Minister if all extractive interests reach agreement on an alternative approach. Our rationale for this approach is set out below.

Māori accepted a specific share of all commercial fish-stocks as part of a full and final Settlement

20. The Crown undertook to provide Māori with 10% of the quota for all stocks in the Quota Management System (QMS) when the Interim Fisheries Settlement was agreed in 1988. When the Deed of Settlement was finalised in 1992, they agreed that all stocks introduced to the QMS from that time would generate a 20% share for Māori. As part of this agreement, Māori endorsed the QMS as an appropriate regime for managing commercial fisheries. At the time of the Māori Fisheries Settlement the only proportional interests were held by quota owners, who owned a share of the TACC. Allowances for customary and recreational interests were for a fixed amount.

21. This rights-based system formed the basis for the commercial part of the Māori Fisheries Settlement. The system underpins sound management of fishing, in which rights holders take responsibility for managing their share of the TAC. The benefits of good stock management are expected to accrue to those who have a proportionate interest in the fishery, taking into account the priority right held by customary interests in the event that customary needs increase.

22. The Crown and Māori also agreed that the Minister would develop policies to help recognise use and management practices of Māori in the exercise of non-commercial fishing rights. As part of this agreement, the Minister recommends regulations to recognise and provide for customary food gathering by Māori. The regulations should also include the special relationship between

tangata whenua and those places which are of customary food gathering importance to the extent such food gathering is neither commercial in any way nor for pecuniary gain or trade. These "customary" regulations enable kaitiaki to take responsibility for managing customary fishing, including issuing authorisations and reporting catch.

Recreational fishing is a privilege

23. Recreational fishing is a privilege which should not be exercised at the expense of Māori commercial and non-commercial fishing rights. In recent times the recreational sector has operated within an unconstrained allowance. This situation provides little incentive for the recreational sector to constrain catch within the recreational limit. Similarly, it provides little incentive for the commercial sector to work collaboratively to increase stock abundance given the likelihood that any benefits of a rebuild will be allocated to the recreational sector. We acknowledge there are input controls such as bag limits; however, there is no effective constraint on total recreational catch.

24. To be consistent with the Māori Fisheries Settlement, the recreational allowance should reflect the catch taken in 1992, when the Deed of Settlement was signed. However recreational allowances did not become part of the TAC until the Fisheries Act 1996 came into effect. Since then general practice has involved setting allowances when TACCs are varied and TACs are set, or when stocks are introduced into the QMS. We are aware the courts have ruled that the Minister has discretion to set the allowance when initially allocating a TAC up to the level of estimated catch, based on beset available information. However, we do not accept any subsequent increases in the allowance. From a fisheries management perspective, such decisions encourage a "race for fish". Responsible fisheries management aims to avoid this kind of behaviour.

25. If the recreational sector wishes to see a system that provides greater potential for the allowance to be increased above its initial allocation, a full review of the framework for managing the recreational sector is required. This would require further consideration of options to more tightly manage recreational catch within the recreational allowance. A system that allows for the recreational sector to increase catches would need to be carefully designed and take explicit account of obligations under the Māori Fisheries Settlement.

3.3 The effect of "28N Rights" on the Māori Fisheries Settlement must be addressed

26. When the QMS was first introduced, ITQ for each stock was based on a set tonnage. It soon became apparent that provisional catch histories (and subsequent TACCs) in some fisheries was too high and the Crown acted to reduce the catch.

27. The regime at that time required the Crown to buy back quota and retire it. The Government chose to change the law to provide eligible parties with the choice of putting a specific amount of their provisional catch history or quota "on hold", to be released if the TACC was subsequently increased. If the fishery recovered, the 'on hold' entitlements had first access to the increase under the Fisheries Act. Once 'refunded' in this way, the quota is normalised and holds the same rights as remaining quota. This preferential quota and the associated rights and processes were initially provided for under Section 28N of the Fisheries Act 1983. Hence, they became known as "28N Rights".

28. Many quota owners chose to have their affected quota declared subject to 28N conditions. However, following the establishment of 28N rights, the Crown changed the basis of quota from a fixed volume to a proportional share of the TACC. Consequently, when a TACC is increased for fisheries where quota owners hold 28N rights, the increase transfers to those quota owners until the combined 28N rights for that fishery are exhausted. Because there is a fixed number of shares in the fishery, this can only be achieved by increasing the number of shares held by the 28N rights holder and decreasing the shares held by other quota owners, including Māori Fisheries Settlement quota owners.

29. In 1996, 28N rights were carried through into Section 23 of the Fisheries Act 1996 from the Fisheries Act 1983. We argue that the application of 28N rights is inconsistent the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992. Given the application of the Fisheries Act 1996 ensures that:

> *all persons exercising or performing functions, duties, or powers conferred or imposed by or under it shall act, in a manner consistent with—*
> *(a) New Zealand's international obligations relating to fishing; and*
> *(b) the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.*

It is unacceptable to reduce Māori Fisheries Settlement portion of quota shares

30. Where 28N rights are invoked, the share of quota that Iwi hold will be reduced. This undermines the agreement that Māori would receive 10% of all stocks in the QMS at the time of the Interim Fisheries Settlement (1989).

31. In light of the Settlement, the Minister must act in accordance to his duties, rights and powers under the Fisheries Act 1996, in a manner consistent with the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992[6]. This should include considering any potential dilution of the Iwi share of the TACC, when making decisions to change TACC. Fisheries New Zealand may undermine the Settlement legislation if they fail to follow this approach. The 28N rights exist in fisheries being reviewed this year. In this response we point out where 28N rights may breach the Settlement legislation. In each case we request that remedial steps are taken to prevent a proportionate reduction in settlement quota.

3.4 The Fisheries Act enables a flexible approach to managing catch

32. The Initial Position Paper assumes changes in TACs and TACCs are the best way to respond to stock assessments that show a stock has declined. This approach is very limited as the Fisheries Act 1996 enables a variety of approaches to ensure sustainability[7]. The Minister should only consider setting or varying a TACC where it is the most appropriate option.

33. In our view, the Fisheries Act enables the Minister to consider the way a fishery is managed before deciding whether a formal sustainability measure should be proposed. The Fisheries Act provides for more responsive fisheries management than can be achieved through a blunt TAC/TACC reduction, by recognising the potential for Iwi or industry-led actions to better address sustainability concerns. This is reflected in the opportunity to "take into account" such actions under section 11(1) of the Fisheries Act before deciding whether to propose a sustainability measure. Even in situations where the Minister proposes to set a sustainability measure, Iwi or industry can promote an alternative approach in response to consultation under section 12 of the Fisheries Act.

[6] Refer to Section 5 (b) of the Fisheries Act 1996.

[7] Note that section 11(3) of the Fisheries Act 1996 sets out a range of options that are available to the Minister to ensure sustainability

34. Before proposing to set or vary a sustainability measure for one or more stocks, the Minister must take into account a range of matters, including the effects of fishing on the aquatic environment[8]. The former Ministry of Fisheries developed and consulted on a series of policy definitions on the "Front End" of the Fisheries Act 1996. It confirmed that section 11(1)(a) of the Fisheries Act provides for "existing or proposed measures that currently, or potentially, manage any adverse effects of fishing to be taken into account before the need for a sustainability measure to be determined".

ACE shelving is an appropriate option

35. Shelving of ACE is a viable way of reducing the commercial catch. The Minister is obliged to take such shelving arrangements into account in accordance with section 11(1)(a) of the Fisheries Act. If the Minister is satisfied that the arrangements will adequately mitigate a risk to sustainability. There is no legislative obligation to choose from the list of statutory sustainability measures set out is in section 11(3) of the Fisheries Act. In such cases, the Minister would not be directed to either section 13 or section 14 in order to vary a TAC for one or more stocks.

3.5 There isn't a "one size fits all" approach to setting target stock levels and rebuild rates

36. If the Minister decides to set or vary a catch limit[9], he must consider those matters relevant to a stock managed under the QMS[10]. Under section13 of the Fisheries Act, a stock should have a TAC that maintains the stock at or above a level that can produce the maximum sustainable yield (often summarised as B_{MSY}), having regard to the interdependence of stocks. The Fisheries Act enables discretion over the way and rate the stock rebuilds or is fished down to the level of B_{MSY}. Importantly, as noted above, the Fisheries Act[11] provides a range of tools - in addition to TACs -to assist with any necessary rebuild process.

37. In considering the obligations set out in section 13, Fisheries New Zealand defers to a 'Harvest Strategy Standard for New Zealand Fisheries' (HSS), produced by the Ministry of Fisheries in 2008. The HSS is described as "a policy statement of best practice regulation to the setting of fishery and stock targets and limits for fish stocks in Aotearoa's QMS." It was intended to form a core input to the Ministry's advice to the Minister of Fisheries on the management of fisheries,

[8] See section 11(1) of the Fisheries Act 1996

[9] See section 11(4) of the Fisheries Act 1996

[10] Sections 13 and 14 of the Fisheries Act 1996 set out the considerations that apply to a stock managed under the QMS

[11] See section 11 (3) of the Fisheries Act 1996

particularly the setting of TACs under sections 13 and 14. The HSS document is now 10 years old. It is difficult to sustain an argument that a non-statutory document of that age could be viewed as promoting best practice regulation.

38. The HSS sets out default management targets for stocks as well as both "soft" and "hard' Limits. Where the best available information suggests a stock has fallen below the soft limit of 20% B_0, the HSS triggers a rebuild plan.

Default targets and timeframes do not mirror the full purpose of the Fisheries Act

39. The purpose of the Fisheries Act 1996 includes an obligation to provide for utilisation, with a focus on enabling people to provide for their own social, cultural and economic wellbeing within limits that ensure sustainability. Employing default target levels and timeframes for fisheries management has real potential to undermine the purpose of the Fisheries Act.

40. Target reference points that correspond to levels of biomass and fishing pressure that are considered to provide for 'optimal' harvests, implicitly internalise economic considerations and/or the ecological requirements for each stock. Hence the target reference points promoted by Fisheries New Zealand avoid explicit consideration of utilisation targets despite provision for them in the Fisheries Act – and the necessary actions to achieve them. In this way, the targets suggested by the HSS have the effect of prescribing rather than enabling management of fisheries beyond the levels required to ensure sustainability.

41. There is considerable discrepancy between the requirements of the Fisheries Act and the implementation of the HSS guidelines. To be consistent with the Fisheries Act, stock rebuild plans should:

- be based on the best available information
- consider all tools available to the Minister
- account for relevant social, economic, cultural factors
- have regard to the interdependence of stocks
- ensure the stock is tracking to level that can produce the maximum sustainable yield.

42. The HSS has the potential to have significant adverse social and economic impacts if applied without careful consideration of the specific circumstances of the fishery and the range of existing mechanisms to promote recovery. As we have already pointed out, it is hard to accept that only one tool for stock recovery in the form of a reduction to the TAC is best management practice. This

"set and forget" approach disregards the range of tools available to rebuild the stock at an optimal rate.

43. The unique biological and environmental conditions facing each stock, as well as socio-economic implications, are all important matters to consider when contemplating management targets. The provisions of the Fisheries Act (rather than the HSS) should be the first point of reference when contemplating management decisions and rebuild strategies to reach those targets.

Collective action will better achieve the purpose of the Fisheries Act

44. Fisheries New Zealand should do more to encourage collective action. Where quota owners are incentivised to act collectively, the evidence suggests they will adopt strategies to promote the management of stocks at levels above the requirements of section 13. Collective action is particularly necessary in shared fisheries, where there are many examples of the recreational sector being rewarded (through an increased allowance) for fishing beyond the allowance set by the Minister when the TAC was first set. As noted, this practice also offends Māori Fisheries Settlement (we refer to our comments on the role of s 5b of the Fisheries Act).

45. Te Ohu Kaimoana has commissioned an international review of the effectiveness of fisheries management systems in achieving conservation objectives. This study has concluded that top-down approaches (of which the HSS guidelines are an example) are inconsistent with modern incentive-based systems. In contrast, the most effective fishery/ecological management systems are bottom up. New Zealand is ideally placed to benefit from these findings and become established as a world leader in marine conservation[12].

3.6 Deemed Values aim to encourage reporting and discourage harvesting without ACE

46. Commercial fishers who do not balance catch with ACE must make deemed value payments. These payments play an important role in making the QMS work effectively. They are intended to:
    - encourage accurate catch reporting
    - discourage fishers from harvesting stocks without ACE.

[12] See Libecap, G, Arbuckle, M, and Lindley, C. (In prep). An analysis of the impact on Māori Property Rights in Fisheries of Marine Protected Areas and Fishing Outside the Quota Management System. A seminar discussing the findings of the study can be viewed here.

47. The Minister sets "interim" and "annual" deemed values for each stock[13]. In doing so, the Minister must take into account the incentive needed for every commercial fisher to have enough ACE to cover their catch for each fishing year. Amongst other things, the Minister should have regard to the market value of the stock and the relevant ACE value.

48. We do not consider the Deemed Value guidelines[14] used by Fisheries New Zealand are aligned with the purpose of the Fisheries Act. Fisheries New Zealand's approach to deemed values is to ensure commercial catch does not exceed the TACC. This approach has the potential to increase incentives for fishers to discard catch. In our view, deemed values were never intended to only ensure commercial catch does not exceed the TACC. Rather, a key purpose is to encourage transparency across the fisheries management system so that catch is reported, and the information forms an important input to the monitoring of harvesting. Ultimately, the relationship between the TACC and catch reporting is a dynamic one.

It is important to avoid any disincentive to record catch

49. There is a balance to be struck between incentives to harvest with ACE (within the TACC) and accurate reporting of catch.

50. The deemed value for a particular stock can be set at or scaled up to a level that removes any profit after harvesting costs are deducted. These conditions create an incentive for fishers to cover their catch with ACE. If they are unable to do so, then there is no disincentive to report the catch and land it. This approach is consistent with the Fisheries Act and the Māori Fisheries Settlement and has the real potential to increase the quality of information available to support decision-making if it is administered that way.

There is a balance to be struck between incentives to fish with ACE and accurate reporting of catch

51. Discouraging catch in excess of ACE holdings is achieved by ensuring the deemed value is set above the ACE price. The requirement to ensure that the deemed value system does not

[13] See section 75 of the Fisheries Act 1996

[14] "Deemed Value Guidelines" were released in 2012. Application of the guidelines has resulted in deemed values being set at, or ramped to, levels that are higher than the market value of a stock in some instances. Under this situation the incentive to land and report catch is removed.

encourage the discarding of fish at sea is achieved by ensuring the deemed value rate does not exceed the market value of the stock. This implies that deemed values should always be set with the range set by the market value of fish and the value of ACE for that stock.

52. Accurate reporting is vital if we are to understand whether TACCs have been set appropriately. If TACCs are set incorrectly, varying levels of deemed value payments can show there is a need to review the TACC. TACCs themselves are not always set right and need to be regularly reviewed, based on the best available information. This was the basis for deemed values being introduced.

53. The Minister has established a working group to provide advice on the appropriate use of deemed values. We understand they have agreed deemed values are primarily a utilisation tool and should not be set higher than the market value of fish.

Payment of deemed values can indicate there is a fisheries management issue to be addressed

54. Deemed values can be used as a tool to identify problems that need to be addressed in a fishery. Deemed values should not be set arbitrarily. There are many potential causes for catches being greater than the TACC which generate different responses, for example:
    - The TACC is too low – optimum response is to increase the TACC
    - Deliberate over catch by one or two parties – respond by setting an overfishing threshold
    - The deemed value is too low – respond by increasing the deemed value
    - A recruitment pulse with a temporary increase in biomass – to remove the incentive to fish what is balanced with ACE

55. We acknowledge that the information available to set deemed values appropriately is imperfect. The key inputs of market value of fish and ACE price are all confounded by the way that quota owners are structured. Hence the setting of deemed values becomes a pragmatic exercise. It needs to find the balance between incentivising catching with the available ACE and accurately reporting all catch, irrespective of what can be balanced with ACE.

4.0 Our preferred approach to managing the fish stocks under review

4.1 Deepwater Stocks

Overview

56. Fisheries New Zealand is reviewing its TAC/TACCs for the following deepwater fisheries:
    - Hake (HAK7)
    - Hoki (HOK1)
    - Ling (LIN7)
    - Orange roughy (ORH3B & ORH7A)
    - Gemfish (SKI3 & SKI7)

57. We will be working with the Deepwater Group to assist them in finalising their position on deepwater stocks.

4.1.1 Hake (HAK7)

Our view

58. **We support Option 1 to decrease the TAC, TACC and a reduction in the allowance for other sources of fishing related mortality**

Proposed options

59. The proposed options for HAK7 are set out in Table 1.

Table 1: Proposed management settings in tonnes for HAK7 from 1 October 2019, with the percentage change relative to the status quo in brackets.

Option	TAC (t)	TACC (t)	Other sources of fishing-related mortality (t)
Current Setting	5,120	5,064	51
Option 1	3,200 ↓ (38%)	3,163 ↓ (38%)	32 ↓ (37%)
Option 2	2,300 ↓ (55%)	2,272 ↓ (55%)	23 ↓ (55%)
Option 3	1,400 ↓ (73%)	1,382 ↓ (73%)	14 ↓ (73%)

Our approach

60. **The science indicates that there is a sustainability issue for HAK7**

    The base model for the 2019 stock assessment indicates the biomass of the stock is 17%B_0. This indicates a sustainability issue and the need for action to rebuild the stock.

61. **Reducing the TACC by 38% would reflect the current catch of HAK7**

    The biomass of the West Coast South Island is expected to increase under average recruitment and current catch. This is supported by data from independent inshore trawl surveys in 2017, which both suggest the 2016 year-class may be above average. Although these cohorts were not included in the biomass projections, recruitment of these year class will contribute to the rebuild.

62. **Reducing the TACC for HAK7 will not unduly inhibit/choke the Hoki Fishery under our proposed option set out in our response for HOK1**

    In recent years HAK7 has mainly been caught as hoki fishery bycatch. In 2017/18, less than a third of the proportion of HAK7 was taken as a target species. Reducing HAK7 under Option 1 is unlikely to affect fishers' ability to catch their hoki ACE and may lead to reduced HAK7 target fishing. In the absence of an industry proposal to manage through the shelving of ACE, Option 1 changes the TACC of HAK7 to a level that is appropriate for HAK7 to recover.

4.1.2 Hoki (HOK1)

Our view

63. **We do not support any of the proposed options and recommend the status quo is maintained. The current shelving arrangement of 20,000t for the Western Stock (and no provision for under catch to be carried over) should be retained for the 2019/20 fishing year**.

Proposed options

64. The proposed options for HOK1 are set out in Table 2.

Table 2: Proposed management settings in tonnes for HOK1 from 1 October 2019, with the percentage change relative to the status quo in brackets.

		Non-regulatory catch split arrangement			Allowances (tonnes)		
Option	**TAC**	**TACC**	**Eastern stock limit**	**Western stock limit**	**Customary Māori**	**Recrea-tional**	**Other sources of fishing related mortality**
Current status	151,540	150,000	60,000	90,000	20	20	1,500
Option 1	131,340↓ (13%)	130,000↓	60,000	70,000↓ (22%)	20	20	1,300↓
Option 2	121,340↓ (20%)	120,000↓	60,000	60,000↓ (33%)	20	20	1,200↓

Our approach

65. **The Hoki fishery is a significant fishery to Iwi/Māori**

Iwi/Māori collectively own over 44% of the quota who desire a management approach that enables greater responsibility to be assured by quota owners.

66. **Iwi quota owners have made a commitment to actively manage the hoki fishery to ensure it's enduring and intergenerational**

Iwi are in this fishery for the long run. Iwi hoki quota owners inform industry management approaches to ensure the right thing is done for the hoki fishery, for Tangaroa and for future generations. Iwi hoki quota owners meet regularly to determine a collective approach for the management of the fishery, based on the following information and guidance:

- The latest science developments.
- Fishing intelligence from Sealord regarding their past 12 months of fishing experience.
- Policy advice from Te Ohu Kaimoana.

The approach and collective views of Iwi are reviewed on an annual basis (though Iwi have met twice in the past 12 months exclusively about the hoki fishery). Iwi views and aspirations help to inform the Deepwater Group process and ultimately the Minister via Te Ohu Kaimoana. Iwi prefer this comprehensive approach based on ongoing active management over the historic approach of relying solely on adjustments to the TACC. The approach is consistent with Iwi aspirations of tino rangatiratanga.

67. **We support a collaborative approach that delivers the fine scale management needed for sustainable fisheries management**

A comprehensive management agreement for the hoki fishery was agreed to and implemented for the 2019/20 fishing year by deep water quota holders and the Deepwater Group (DWG) with guidance from Iwi. This agreement was the result of concerns from industry over the reduced availability of hoki in the West Coast South Island fishery. These concerns prompted industry to:

- Shelve 20,000 tonnes HOK1W ACE (along with any HOK1W ACE carried forward from 2017-18 for the 2018-19 year).
- Enhance and refine the areas closed to hoki fishing in order to protect juvenile hoki.
- Close certain fishing grounds to target fishing for hoki to allow spawning to occur undisturbed at peak times.

The industry agreement considers multiple factors that affect the HOK1 fishery. We support fine scale management over a TAC and a TACC reduction.

68. **We support the development of a new stock assessment model**

In the absence of a reliable and robust stock assessment model, the biomass surveys will continue to provide fishery-independent information to inform management. Given, recent year class strengths have been strong and should be recruiting into the Western stock. Fishing mortality levels have been in line, or below, those assessed to be sustainable. Environmental changes, particularly high oceanic water temperatures, may well be a driver.

69. **We support continued precautionary management measures while the science is further investigated**

We note that in the current year additional actions have been taken at the company level to further reduce the HOK1 catch. Examples of this include Sealord deploying Tokatu and FV Rehua outside of the HOK1 fishery. These changes allow for an even greater reduction in the HOK1 harvest. This demonstrates the influence of providing flexibility for fishers to take action to ensure long-term sustainability of the hoki fishery.

4.1.3 Ling 7 (LIN7)

Our view

70. **We support a modified Option 1 to increase the TAC, TACC and other sources of fishing related mortality**

Proposed options

71. The proposed options for LIN7 are set out in Table 3.

Table 3: Proposed management settings in tonnes for LIN7 from 1 October 2019, with the percentage change relative to the status quo in brackets.

Option	Allowances				
	TAC (t)	TACC (t)	Customary Māori (t)	Recreational (t)	Other sources of fishing related mortality (t)
Current Setting	3,144	3,080	1	1	62
Option 1	3,458 ↑ (10%)	3,388 ↑ (10%)	1	1	68 ↑ (10%)
Option 2	3,772 ↑ (20%)	3,696 ↑ (20%)	1	1	74 ↑ (20%)

Our approach

72. **Increasing the TAC and TACC by 10% reflects the current catch of LIN7**
Every year since 2013/14 the TACC has been over caught by an average of 9.2%. This has necessitated the payment of deemed values to the Crown.

73. **In principle we are supportive of a 20% increase if industry can put in place a shelving mechanism to manage the increase**
Fisheries New Zealand has limited resources to review stocks each year. Increasing the TAC and TACC by 20% with half of the increase shelved would give industry flexibility to manage the fishery into the future, without consuming Fisheries New Zealand resources.

4.1.4 Orange Roughy (ORH3B)

Our view

74. **We support the continuation of the proposed thee year increase of ORH3B TAC and TACC**
    In 2018 the Minster of Fisheries agreed to a three-year staged increase of ORH3B TAC and TACC based on an updated stock assessment that indicated the biomass had increased.

Proposed options

75. The proposed management settings for ORH3B1 are set out in Table 4.

Table 4: Proposed management settings in tonnes for ORH3B1 from 1 October 2019

	Current year	Year 2 (2019/20)	Year 3 (2020/21)
TAC	6413	↑ 7116	↑ 8055
TACC (for all sub-QMAs)	6091	↑ 6772	↑ 7667
Allowance for other mortality caused by fishing	317	↑ 339	↑ 383
Customary Māori allowance	5	5	5
Northwest Chatham Rise	1150	1150	1150
East & South Chatham Rise	4095	↑ 4775	↑ 5670
Puysegur	347	347	347
Arrow Plateau	0	0	0
Sub-Antarctic	500	500	500

Our approach

76. **The 2017 stock assessment and future projections indicate continued growth in ORH3B and provide confidence that the stock can sustain the proposed increases**
    The two key sub-stocks in ORH3B: Northwest Chatham Rise (NWCR) and East and South Chatham Rise (ESCR) are estimated to be increasing. The NWCR stock was estimated to be at 38%B_0 and the ESCR stock was estimated to be at 33%B_0. Projections over the next five years estimate that ORH 3B will continue to increase under the proposed catch levels. ORH stocks are generally monitored using acoustic surveys and stocks assessments completed every four years.

77. **The increase of the TACC of the sub-stock ESCR shouldn't pose a sustainability risk to OEO4**
    The Increasing the TACC of ORH3B is likely to increase the catch of black oreo by 16 tonnes and smooth oreo by 67 tonnes. The increased ORH3B TACC and subsequent fishing of ORH3B is not

expected to lead to any over catch of the OEO4 TACC. We support the multi-species approach to management. This approach considers the relationship between stocks caught together.

4.1.5 Orange roughy (ORH7A)

Our view

78. **We support a modified option 2 to increase the TAC, TACC and other sources of fishing mortality**
79. **We recommend setting a customary allowance of two tonne**

Proposed options

80. The proposed options for ORH7A are set out in Table 5.

Table 5: Proposed management settings in tonnes for ORH7A from 1 October 2019, with the percentage change relative to the status quo in brackets.

Option	Total Allowable Catch (tonnes)	Total Allowable Commercial Catch (tonnes)	Allowances		
			Customary Māori (tonnes)	Recreational (tonnes)	All other mortality to the stock caused by fishing (tonnes)
Option 1 (Status quo)	1680	1600	0	0	80
Option 2	2163 ↑ (29%)	2060 ↑ (29%)	0	0	103 ↑ (29%)
Option 3	2310 ↑ (38%)	2200 ↑ (38%)	0	0	110 ↑ (38%)
Option 4	2555 ↑ (52%)	2433 ↑ (52%)	0	0	122 ↑ (52%)

Our approach

81. **An increase in the TACC of ORH7A would be sustainable according to the stock assessment completed using the acoustic biomass survey from July-August 2018**

    The estimated stock status of ORH7A is 37%B_0.

82. **We would like to see the high seas component managed consistently with the Fisheries Act 1996 and align with settlement obligations**

    ORH7A is a straddling stock**.** It is a biological stock which extends across the boundary of New Zealand's EEZ onto the high seas known as Westpac Bank. Catch from the Westpac Bank is

counted against the TACC, this means fishers are required to balance what is caught in the Westpac Bank with ACE.

83. **We support a modest increase until a partnership with government and industry is developed to allow for the effective management this fishery**

We see the implementation of Aotearoa's fisheries management and kaitiakitanga being extended into the high seas. We wish to remain engaged with Fisheries New Zealand to ensure this is achieved.

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

We recommend this allowance be set at two tonnes. The pātaka system creates more opportunities for the customary take of commercially harvested species. We support setting a customary allowance for ORH7A to allow Māori to utilise, consistent with the recently approved pātaka arrangements.

4.1.6 Gemfish - Tikati (SKI3)

Our view

85. **We support Option 2 to increase the TAC, TACC and the allowance for other sources of fishing related mortality.**

    We recommend setting a customary allowance of 1 tonne.

Proposed Options

86. The proposed options for SKI3 are set out in Table 6.

Table 6: Proposed management settings in tonnes for SKI3 from 1 October 2019, with the percentage change relative to the status quo in brackets

Stock	Option	Total Allowable Catch (TAC)	Total Allowable Commercial Catch (TACC)	Allowances		
				Customary Māori	Recreational	All other mortality to the stock caused by fishing
SKI 3	Status quo	300	300	0	0	0
	Option 1	455 ↑ (52%)	450 ↑ (50%)	0	0	5 ↑
	Option 2	606 ↑ (106%)	600 ↑ (100%)	0	0	6 ↑

Our approach

87. **The 2019 preliminary stock assessment suggest a considerable increase in southern gemfish abundance in recent years**

    The increased abundance is likely to be due to three-year classes recruiting into the fishery. The 2019 assessment projected a stock increase in the short term (1-3 years), however, was not able to reliably estimate current stock status.

88. **Increasing the TACC will allow for utilisation without incurring deemed values**

    During the fishing year 2017/18 the SKI3 TACC was 155 percent caught and accrued $263k in deemed values. As at 19 July, the TACC for the 2018/19 fishing year was 184 percent caught. Data from the 2018/19 fishing year has also indicated that the trend of increased CPUE of SKI3 in the squid fishery has continued.

89. **Introducing a customary allowance will allow for SKI3 to be included in pātaka**
A recent survey estimated less than 200kg a year was the take for non-commercial purposes for SKI3 and SKI7 combined. The Pātaka system creates more opportunities for the customary take of commercially harvested species. We support setting a customary allowance to allow Iwi/Māori to utilise this opportunity in the SKI3 fishery.

4.1.7 Gemfish (SKI7)

Our view

90. **We do not support any changes to the TACC that result in preferential allocation (28N) rights**
We support status quo until the government has resolved 28N rights and can increase TAC/TACCs without reducing Iwi quota shares.

91. **We recommend a customary allowance that of two tonnes**

Proposed options

92. The proposed options for SKI7 are set out in Table 7.

Table 7: Proposed management settings in tonnes for SKI7 from 1 October 2019, with the percentage change relative to the status quo in brackets.

Stock	Option	Total Allowable Catch (TAC)	Total Allowable Commercial Catch (TACC)	Allowances		
				Customary Māori	Recreational	All other mortality to the stock caused by fishing
SKI 7	Status quo	300	300	0	0	0
	Option 1	606 ↑ (106%)	600 ↑ (100%)	0	0	6 ↑

Our approach

93. **Māori settlement quota will be diminished if the TACC is increased and preferential allocation rights (28N rights) are given effect to in SKI7**
We do not support increasing the TACC for any stock where 28N rights may be given effect in area total of 158.5 tonnes of the quota in SKI7 relate to the preferential 28N rights in SKI7. This may result in diminishing the settlement quota from the agreed 10 percent to 6.64%. We oppose measures that have the potential to reduce the proportion of settlement quota. For our full position on 28N rights, refer to Section 3.3 of this response.

94. **The abundance of SKI7 is a utilisation opportunity and a current constraint**

Increasing TACC allows for utilisation of SKI7 which is set out in the Fisheries Act. We highlight two key points which support the increase of the TACC. Firstly, the best available information indicates there is an increase in stock biomass. Secondly, an increase would reduce the risk of fishers being faced with high deemed values. During the fishing year 2017/18 $591k in deemed values was incurred in SKI7. Based on the trends of last year the TACC is likely to be over caught by the end of the fishing year. This will have a huge financial impact on fishers despite there being no sustainability issue. Although we concede that there are relevant considerations that may provide for the Minister to increase TACC, our position remains that TACC should not be increased if there is a potential resulting reduction in the settlement quota.

95. **This highlights a contradiction in the Fisheries Act**

The Fisheries Act purpose is to enable utilisation within biological constraints. The Minister is bound by the Fisheries Act when making decisions or exercising his powers to do so in accordance with section 5(b), which requires any action to be consistent with the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992. SKI7 is a clear example that exhibits the need for a resolution of 28N rights.

96. **Introducing a customary allowance will allow for SKI3 to be included in pātaka**

A recent survey estimated less than 200kg a year was the take for non-commercial purposes for SKI3 and SKI7 combined. The pātaka system creates more opportunities for the customary take of commercially harvested species. We support setting a customary allowance for SKI7 to allow Iwi/Māori to utilise these opportunities.

4.2 Inshore Stocks

Overview

97. Fisheries New Zealand is reviewing its TAC/TACCs for the following inshore fisheries:
    - Area 7 Trawl:
        i. Elephantfish (ELE7)
        ii. Red Gurnard (GUR7)
        iii. John dory (JDO7)
        iv. Rig (SPO7)
    - Pāua (PAU4)
    - Red Snapper (RSN1 & RSN2)
    - Kina (SUR1A & SUR1B)
    - Tarakihi (East Coast TAR1, TAR2, TAR3 & TAR7)

4.2.1 Area 7 Trawl Fishery

Our view

98. **We support the multi-species approach to management**
    This approach considers the relationship between stocks caught together. We agree that a range of factors such as stock productivity, abundance, and target interactions should be considered when management decisions are made.

99. **These proposals are only a first step**
    We understand this trawl fishery has been chosen to trial a mixed species approach, but it doesn't make sense to exclude the snapper fishery in this review (see below). There are other fisheries that are also part of the mix that are not included in the review.

100. **We support modest increases in the TACCs for Red Gurnard (GUR7), Rig (SPO7) and Jon Dory (JDO7)**

The following are our views on management options for the stocks reviewed:

- GUR7: we support an increase in the Total Allowable Commercial Catch (TACC) of 10% (part Option 2)
- SPO7: We support an increase in the TACC of 10% (Option 2)
- JDO7: we support an increase of 10% (Option 2).

101. **We would support an increase of 20% in the TACC for GUR7 and SPO7**

We support Option 3 for SPO7; part Option 3 for GUR,7 but only in the context of a fisheries plan that has the full commitment of quota owners[15].

102. **We support establishment of allowances for Elephant Fish (ELE7)**

We support the proposed option to retain the TACC at 102 tonnes and establish a customary allowance of five tonnes, a recreational allowance of 10 tonnes and set an allowance for other sources of fishing related mortality of 10 tonnes (Option 1).

103. **We oppose an increase in the recreational allowance for GUR7**

Increasing the allowance will adversely affect Iwi interests in this fishery by reducing their share of the Total Allowable Catch (TAC). This undermines Iwi rights under the Deed of Settlement.

104. **The recreational allowance for SNA7 should be restored to its 2016 level as part of this review**

The decision to increase the recreational allowance in 2016 from 90 tonnes to 250 tonnes was based on incorrect information and the decision needs to be remedied. This increase undermines Iwi rights under the Deed of Settlement.

Proposed options

105. The proposed options for GUR7, SPO7, JDO7 and ELE7 are set out in Table 8.

Table 8: Current and proposed TACs, TACCs and allowances in tonnes for red gurnard, rig, john dory and elephant fish

[15] The plan we refer to would be developed by quota owners under s 11A of the Fisheries Act.

Stock	Option	Total Allowable Catch (t)	Total Allowable Commercial Catch (t)	Allowances		
				Customary Māori (t)	Recreational (t)	All other mortality caused by fishing (t)
GUR 7	Option 1 *(Status quo)*	1,065	975	15	25	50
	Option 2	1,176 ↑	1073 ↑ (10%)	15	38 ↑ (50%)	50
	Option 3	1,273↑	1170↑ (20%)	15	38 ↑ (50%)	50
SPO 7	Option 1 *(Status quo)*	346	271	15	33	27
	Option 2	373 ↑	298 ↑ (10%)	15	33	27
	Option 3	400 ↑	325 ↑ (20%)	15	33	27
JDO 7	Option 1 *(Status quo)*	226	209	2	4	11
	Option 2	247↑	230 ↑ (10%)	2	4	11
ELE 7	Current setting		102			
	Option 1	127	102	5	10	10

106. Fisheries New Zealand is reviewing the stocks together as they are generally caught together. They state that while each is targeted in its own right, the other stocks are caught as bycatch. For example:
    - an increase in the TACC for GUR7 may result in an increase in bycatch of JDO7 and SPO7.
    - an increase in the TACC of SPO7 is likely to result in an increase in bycatch of GUR7 and JDO7

107. ELE7 appears to be more independent of the other species in the fishery but there may be potential for an increase in the TACC for SPO7 to result in an increase in catch of ELE7, as the two species are caught together.

108. SNA7 hasn't been included in the review, however it is part of this mixed fishery. It is caught as bycatch in GUR7, SPO7 and JDO7. These fisheries are also caught as bycatch in the SNA7 fishery.

Our approach

109. **Stocks that are fished together should be managed together**

    We support an approach that manages stocks in mixed fisheries being managed together. This is consistent with the environmental principles of the Fisheries Act 1996. However, in this case it does not make sense to exclude the SNA7 fishery from this year's review (see below). SNA7 is

an integral part of this mixed fishery. There are also several other stocks that are part of this mixed fishery.

110. **The approach is just a first step**

We understand this proposal to manage the trawl fishery in Area 7 as a mixed fishery is a trial based on a desk-top exercise. We also understand the commercial sector is proposing to invest in a science-based model to assist with improving the management of the fishery. In the longer term, this work could form the basis of a fisheries plan within which quota holders take responsibility for managing all relevant fisheries together at a finer scale.

111. **To varying degrees, GUR7, SPO7, JDO7 and ELE7 are all likely to be at or above the biomass that produces the maximum sustainable yield (BMSY)**

Following the latest trawl survey, these three stocks have been assessed as being at or above sustainable levels to varying degrees. Of the assessments, GUR7 has the highest confidence. The estimated biomass levels for SPO7 and JDO7 are slightly down as a result of the latest surveys. While the estimated biomass for SPO7 is slightly down, it is still high compared to historical trends. There is less certainty in the case of JDO7 and Fisheries New Zealand states the scientific basis for an increase of JDO7 is weaker than the other two stocks.

112. The biological characteristics of these stocks suit different management approaches. For example, species with relatively high productivity (such as GUR7 and JDO7) take less time to rebuild than those with low productivity, and management approaches can be responsive to fluctuations in biomass. For species with low productivity, a longer term more stable TAC is more appropriate.

113. GUR7 is a high productivity stock and has the highest TAC/TACC of all three stocks. It is likely to be able to sustain an increase in the TACC of 10 or 20% over the next few years. Nevertheless, an increase of 20% will have a greater impact on SPO7 and JDO7 as bycatch fisheries. While SPO7 is a longer lived and lends itself to a more conservative approach, survey results suggest strong recruitment in recent years. JDO7 is a relatively high productivity species and can thus rebuild more quickly if required.

114. Taking these factors into account, we support the more conservative TACC increase of 10% for GUR7 (part Option 2) matched with an increase in the TACC for SPO7 and JDO7 of 10% respectively (Options 2). We would be comfortable with greater increases in the TACC for GUR7 and SPO7 - as proposed under Option 3 for each – but only in the context of a fisheries plan developed by quota owners under s 11A of the Fisheries Act.

115. The establishment of recreational and customary allowances for ELE7 as proposed under Option 1 appears to be based on the best available information. On this basis we support the proposal.

116. **An increase in the recreational allowance for GUR7 will undermine the Deed of Settlement**
Our policy on the allocation of fisheries amongst the three sectors is set out in Part 1 of this draft response. An increase in the recreational allowance for GUR7 conflicts with this policy and will decrease the relative shares Iwi hold in this fishery. The increase in the estimate of recreational catch in GUR 7 from 12.48 tonnes to 37.59 tonnes is driving this proposal and appears to be a consequence of the increase in recreational catch in SNA7. A more appropriate response would be to reduce the daily limits for GUR7 so that the catch is constrained by the existing allowance.

117. **Snapper (SNA7) should be considered as part of this review to restore the recreational allowance to 90 tonnes**
Preliminary results of the 2019 trawl survey suggest biomass is continuing to increase for SNA7 however Fisheries New Zealand states the magnitude of the recent increase is uncertain. They propose to bring forward a stock assessment to support a review next year.

118. Elsewhere in their paper, Fisheries New Zealand notes that "anecdotal information and reports from recreational fisheries suggest the abundance of snapper in Tasman and Golden Bays is positive for the recreational sector. The likelihood of catching snapper has seen greater participation in this recreational fishery with increases on other species such as red gurnard". This is borne out by the latest recreational survey which estimates recreational harvest for the 2017/18 year has increased to 147.41 tonnes. The paper also notes that "reports from commercial fishers are that the abundance of snapper is proving problematic". Commercial fishers are having to change their fishing practices to avoid snapper.

119. **Allocation of the SNA7 fishery needs to be resolved to ensure it is consistent with the Deed of Settlement**

In 2016, the TAC for SNA7 was increased from 306 tonnes to 545 tonnes, with 160 tonnes of that increase being allocated to the recreational sector (around 160% increase). Fifty tonnes was allocated to the commercial sector (25% increase). In the lead up to the decision being made, the recreational estimates were found to be inaccurate. In fact, recreational catch was within the pre-existing allowance of 90 tonnes. The Minister should review this fishery and reallocate the increase in recreational allowance back to the commercial sector. This would still provide scope for further reviews based on an updated stock assessment and mitigate the problems faced by the commercial sector.

120. In the longer term, if the recreational sector wishes to see a system in which the allowance can be increased beyond its initial allocation, it should enter discussions with the other extractive users of the fishery and agree allocations in the context of a fisheries plan. The alternative approach is legislative reform. Both points are discussed in chapter 3 of this response.

4.2.2 Pāua (PAU4)

Our view

121. **We support Option 1 to maintain the status quo which recognises the PAU4 Fisheries Plan as the tool for guiding the sustainable and adaptive management of the PAU4 fishery.**
We support the customary and recreational allowances set, as they appear to be appropriate for present and immediate foreseeable needs.

Proposed Options

122. The proposed options for PAU4 are set out in Table 9.

Table 9: Proposed management settings in tonnes for PAU4 from 1 October 2019, with the percentage change relative to the status quo in brackets.

Option	Total Allowable Catch	Total Allowable Commercial Catch	Allowances		
			Customary	Recreational	All other mortality to the stock caused by fishing
Option 1	334	326	3	3	2
Option 2	301.4	293.4 ↓ (10%)	3	3	2
Option 3	269	261 ↓ (20%)	3	3	2
Option 4	236.2	228.2 ↓ (30%)	3	3	2

Our approach

123. **Pāua are a taonga species that are highly valued by Iwi/Imi/Māori**
Iwi/Imi/Māori desire a management approach that endures. They are also significant owners in the commercial fishery: Iwi, Imi and Moana collectively own 51% of PAU4.

124. **We support collaborative fisheries management**
We support fisheries management that captures the collective aspirations of Iwi, Imi and industry. The industry representative body PauaMAC4 developed the PAU4 Fisheries Plan in 2018 on behalf of all PAU4 quota owners and harvesters, and with the involvement and support of Iwi, Imi, and the Chatham Islands community. They were all concerned about the decline of the PAU4 fishery and local depletion.

125. The core objective of the PAU4 Fisheries Plan is to reverse the decline in abundance. The PAU4 Fisheries Plan manages commercial harvesting activity and complements other fisheries management initiatives around the Chatham Islands, including customary management measures. The fishery is essential to the sustainability and the livelihoods of the Chatham Islands community. The long-term potential of PAU4 under effective fine-scale management is not known until its tried.

126. **We support fisheries management that goes beyond using TAC and TACC reductions as the primary fisheries management tool**

We consider shelving and fine-scale management through the PAU4 Fisheries Plan tools which appropriately achieve the purpose of the Fisheries Act 1996[16]. The PAU4 Fisheries Plan is a framework for management that considers the multiple factors that affect the PAU4 fishery. The PAU4 Fisheries Plan restricts the level of commercial harvest through shelving of ACE to achieve catch reductions and to ensure sustainable utilisation. On 13 February 2019, the Minister approved, in terms of s 11A of the Fisheries Act, the PAU4 Fisheries plan. As agreed by the parties to the PAU4 and PAU7 High Court proceeding (in the context of discontinuing the proceeding), ACE shelving is a mandatory relevant consideration in the event of any future TAC/TACC adjustment (pursuant to section 11(2A) of the Fisheries Act 1996)[17].

127. **We support the development of a stock assessment model that compliments the fine-scale management implemented through the PAU4 Fisheries Plan**

We are concerned with the quality of the science. The current analysis of commercial catch and effort data does not adequately assess the status of the fishery. The analysis assumes that effort is standardised and constant, which does not take into account the fine-scale management implemented through the PAU4 Fisheries Plan. The assessment should recognise the effects of catch spreading and variable minimum harvest sizes on CPUE. This will better inform decision-makers on the status of the fishery.

128. **We do not support a TAC decrease that will result in a proportional reduction of Iwi ownership.**

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[16] The 'Purpose and Principles' as stated in Part2(8) of the Fisheries Act 1996: "Provide for utilisation while ensuring sustainability'"

[17] CIV 2017-485-788. The parties to the PAU4 and PAU7 proceeding recently agreed that the Minister must take into account any ACE shelving arrangements provided for in a fisheries plan.

Decreasing the TAC will result in 28N rights being enacted in the event the TAC subsequently increases. This would adversely affect Iwi interests in this fishery by reducing their share of the Total Allowable Catch (TAC). This undermines Iwi rights in the Deed of Settlement. We note this would be avoided if shelving was replied upon.

4.2.3 Red Snapper - Kaorea (RSN1 & RSN2)

Our view

129. **We support Option 2 which reallocates the TACC between the two-red snapper stocks**

Proposed Options

130. The proposed options for RSN1 & RSN2 are set out in Table 10.

Table 10: Proposed management settings in tonnes for RSN1 and RSN2 from 1 October 2019, with the percentage change relative to the status quo in brackets.

Option	Stock	Total Allowable Catch (tonnes)	Total Allowable Commercial Catch (tonnes)	Allowances		
				Customary Māori (tonnes)	Recreational (tonnes)	All other mortality to the stock caused by fishing (tonnes)
Option 1 *(Status quo)*	**RSN 1**	140	124	2	13	1
	RSN 2	25	21	2	1	1
Option 2	**RSN 1**	80↓ (43%)	64 ↓ (48%)	2	13	1
	RSN 2	85↑ (340%)	81↑ (386%)	2	1	1

Note: The effect of the changes associated with Option 2 reallocates 60 tonnes of the RSN1 TACC to the RSN2 TACC. The combined total allowable catch for both stocks is not altered by either Option.

Our approach

131. **We support Option 2 to reallocate the TACC between RSN1 and RSN2**
This provides a solution to the deemed values accrual from RSN2, while not increasing the total RSN TAC. This approach has evened out the disproportionate allocation of ACE between the two QMAs while maintaining a low risk to long term sustainability.

132. **Option 2 addresses the disproportionate allocation of ACE between the two QMAs**
The TACC for RSN1 and RSN2 were set incorrectly when first introduced to the QMS. The current allocation of allowable catch of red snapper between the two QMAs needs to be addressed. Considering historical catch and the size of the QMA, RSN1 has a relatively large TACC of 124

tonnes. In contrast RSN2 is vast and the TACC is 21 tonnes. The majority of red snapper catch is from the Western border of the two QMAs (figure 1).

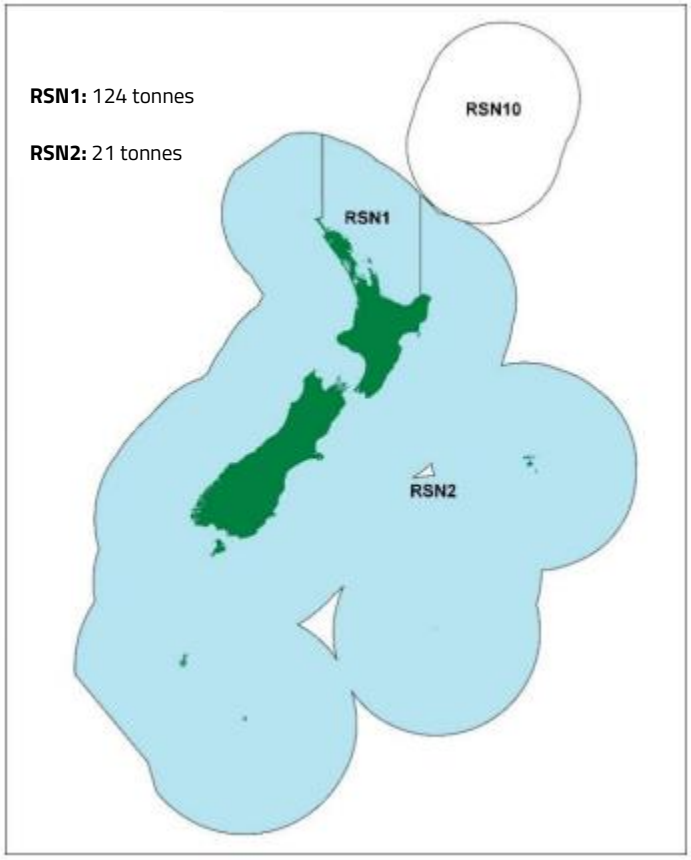

Figure 1: Quota management areas for red snapper stocks.

133. **We support Option 2 as it remediates the deemed value payments accrued in RSN2**
Current TACC settings generate high deemed value payments in RSN2 while RSN1 has remained under caught. The management settings for RSN have not been altered since its introduction to the QMS in 2003/04 and deemed values for RSN2 have increased in frequency and scale during this period; they now average $5,600 per annum.

134. **We do not consider the reallocation of 60 tonne between red snapper stocks to be a sustainability risk**

The nature of the increase is to cover the excess catch already occurring in the QMA. This means that the increased TACC of RSN2 will allow current catch to be balanced against ACE rather than accrue deemed value payments. The Initial Position Paper consultation document suggests a potential sustainability risk associated with increasing the TACC for RSN2. The overall catch of red snapper is relatively low as it is a bycatch species, there is no information to suggest that current catch levels are posing a risk to the stock.

135. **Amalgamation of QMAs would be premature and difficult to achieve**

We consider an absence of information is not a reason to change QMA boundaries. We support the alteration of catch limits as an appropriate measure for 2019/20. Information on stock connectivity would be required to provide a basis for changing of QMA boundaries. However, this would be expensive and difficult to obtain. The level of resource investment required for this information isn't necessary for a non-target species with low catch levels. Managing the TACC through monitoring CPUE is more appropriate for red snapper.

136. **Red snapper has become more prevalent, and the current settings are constraining catch**

Red snapper is caught as bycatch in snapper and tarakihi target fisheries and the lack of RSN2 ACE restricts fishing in optimal fishing grounds for these high value species. There is no stock assessment to quantify the current status of red snapper, however red snapper is a group six species under Fisheries New Zealand's classification. This classification is given to stocks under relatively low fishing pressure; usually bycatch species. In group six instances, a less cautious approach is appropriate and catch per unit effort indices can be used for determining TACC changes. The provisions of group six allow opportunities for utilisation while minimalising unnecessary costs. Due to these conditions we consider there is sufficient information and rationale for Option 2.

137. **Balancing the TACC between RSN1 and RSN2 will help the management of other stocks**

The boundaries for voluntary catch spreading of TAR1 align with the RSN QMA boundaries. In order to alleviate pressure on East Coast tarakihi, fishers are able to move effort to the west (statistical area 47). However, there is limited RSN2 ACE to enable fishers to fish in this area without incurring deemed values liabilities; this is limiting the ability for fishers to spread the effort from east to west in an economically viable way.

4.2.4 Kina (SUR1A & SUR1B)

Our view

138. **We support Option 1 to maintain the status quo in both SUR1A and SUR1B.**

We recommend Fisheries New Zealand include SUR1A and SUR1B in their Review of Sustainability Measures for 1 October 2020 after resolving the following issues:

- **Lack of Scientific information; and**
- **Appropriate pre-consultation workshops.**

We recommend that Industry works with Iwi and other stakeholders to develop a Fisheries Plan.

Proposed Options

139. The proposed options for SUR1A and SUR1B are set out in Table 11.

Table 11: Proposed management settings in tonnes for SUR1A and SUR1B from 1 October 2019, with the percentage change relative to the status quo in brackets.

Stock	Option	Total Allowable Catch (tonnes)	Total Allowable Commercial Catch (tonnes)	Allowances		
				Customary Māori (tonnes)	Recreational (tonnes)	All other mortality to the stock caused by fishing (tonnes)
SUR 1A	Option 1 *(Status quo)*	172	40	65	65	2
SUR 1A	Option 2	206 ↑ (20%)	48 ↑ (20%)	78 ↑ (20%)	78 ↑ (20%)	2 ↑
SUR 1A	Option 3	259↑ (50%)	60 ↑ (50%)	98 ↑ (50%)	98 ↑ (50%)	3 ↑
SUR 1B	Option 1 *(Status quo)*	324	140	90	90	4
SUR 1B	Option 2	389 ↑ (20%)	168 ↑ (20%)	108 ↑ (20%)	108↑ (20%)	5 ↑
SUR 1B	Option 3	486 ↑ (50%)	210 ↑ (50%)	135↑ (50%)	135↑ (50%)	6 ↑

Our approach

140. **Fisheries New Zealand failed Iwi/Māori by including SUR1A and SUR1B in this year's sustainability rounds**

Given the significance of kina as a taonga species, Fisheries New Zealand should have held pre-consultation workshops with Iwi and Stakeholders to inform participants and guide future decision making. We are now forced into the sustainability round process at a great cost to Iwi and Industry.

141. **Kina is a taonga species and holds significant cultural value to Iwi/Māori**
The SUR1A and 1B fisheries span north eastern New Zealand. Settlement quota is allocated to 21 Iwi. A significant proportion of the Māori population lives in the area, particularly in urban centres. Iwi are also significant owners in the commercial fishery with collective interests (including Iwi and Moana) owning 22.5% of the quota in SUR1A and 1B.

142. **We support collaboration in fisheries management**
Iwi and Industry have indicated the desire to work collaboratively in how they fish SUR1A and SUR1B**.** Iwi and Industry along with others who have interests in the fishery (recreational and environmental) can develop a fisheries plan to support and enable fishers to actively manage the fishery and 'kina barrens'.

143. **We are concerned with the lack of scientific stock information**.
Given the significant non-commercial value in these fisheries, we believe there should be a stock assessment to better inform decision makers. This should include baseline of the state of the fishery, which would be a way of ground truthing anecdotes around the proliferation of 'kina barrens'. 'Kina barrens' present a major risk to many interdependent reef species that rely on valuable kelp habitat for foraging and refuge through many stages of their life history.

144. Increasing the TACC will not get rid of 'kina barrens' and could lead to increased effort in customary areas. 'Kina barrens' produce 'skinny' kina which are of little value to customary and commercial fishers. Tangata whenua often gather kina from discrete areas which are accessible and safe to dive. The increase could lead commercial effort away from the barrens and into these discrete areas that are significant to tangata whenua.

145. **We are concerned with Fisheries New Zealand's proposals to increase recreational and customary allowances without supporting information**
This decision directly contradicts our allocation policy (see Part 1). Increasing the recreational allowance undermines the Deed of Settlement by further diminishing Iwi customary commercial stake in the fishery. Increasing the customary allowance is based on needs, and there is currently not enough information to support the proportional increases in option 2 and option 3. In the interim, the customary allowance is not binding and will not constrain utilisation.

146. **We support Fisheries New Zealand improving catch information from the recreational and customary sectors**

The Minister's decision letter from 2004 highlighted the need for better information on recreational and customary catch, as well as more information on the fishery to further refine management. This information has not been collected.

147. The lack of reliable recreational catch information is consistent throughout all fisheries and needs to be addressed. While the national panel surveys provide useful numbers for popular finfish in high population areas, they are ineffective at gathering reliable estimates for many dive species, particularly kina. The frequency of useable data is too far apart to recognise issues.

4.2.5 Tarakihi (East Coast TAR1, TAR2, TAR3 & TAR7)

"People come in just for tarakihi, if we don't have it in the shop they walk out." - Ken Houkamau, Ngati Porou Seafoods.

Our view

148. **We support the Eastern Tarakihi Management Strategy and Rebuild Plan (the Plan), summarised by Fisheries New Zealand as Option 3**

The Minister's obligations to move the stock towards BMSY has been met by the reductions made in 2018. Therefore, option 3 best meets the purpose of the Fisheries Act. It sets out a strategy to rebuild the fishery and enables Iwi and other affected parties to continue to meet their economic, social and cultural needs. It takes a more holistic and targeted approach to fisheries management than simply applying TACC cuts.

We endorse the Plan and the measures it proposes. We support the submissions made by our collaborative parties for eastern tarakihi.

Proposed Options

149. Fisheries New Zealand proposes three options to rebuild tarakihi stocks. In the Plan (Option 3), we propose to rebuild the fishery to a stock specific target of 35% SB_0. Projections based on current catch predict a rebuild timeframe of 27 years. The objective of the Plan is to have a the eastern tarakihi stock rebuilt within 20 years through a comprehensive set of management, monitoring, research and engagement initiatives.

150. Options 1 and 2 involve TACC reductions as follows:

- Delivers a management target of 40% of SB_0.
- Sets rebuild timeframes of 12 or 11 years respectively.
- Reduces catch by 31% and 35% respectively.

These options reflect two different approaches to achieving sustainable management

151. The Plan has been developed by Te Ohu Kaimoana and Iwi, Fisheries Inshore New Zealand and Southern Inshore Fisheries and their members. It is an example of a "bottom up" approach that is being led by Iwi, quota owners and fishers. As noted earlier, Te Ohu Kaimoana has commissioned an international review of the effectiveness of fisheries management systems in achieving

conservation objectives. This study has concluded that top-down approaches are inconsistent with modern incentive-based systems[18]. The QMS is an incentive-based system and therefore New Zealand is ideally placed to support a bottom-up approach.

152. A bottom up approach has been shown to be more enduring and incentive building compared to a top down approach (of which blunt TACC reduction is an example of)[19]. Creating opportunities for quota owners and harvesters to work collaboratively and take responsibility for managing the resource generates opportunities that cannot be achieved through the imposition of default-based management settings.

153. Details of how the Fisheries New Zealand options 1 and 2 apply across QMAs are summarised in Table 12.

[18] See Libecap, G, Arbuckle, M, and Lindley, C. (In prep). An analysis of the impact on Māori Property Rights in Fisheries of Marine Protected Areas and Fishing Outside the Quota Management System. A seminar discussing the findings of the study can be viewed here.

[19] Ibid.

Table 12: Fisheries New Zealand's proposed management settings in tonnes for tarakihi stocks: TAR1, TAR2, TAR3 and TAR7, from 1 October 2019, with the percentage change relative to the status quo in brackets

Stock	Option	Total Allowable Catch (tonnes)	Total Allowable Commercial Catch (tonnes)	TACC % change	Allowances		
					Customary Māori (tonnes)	Recreational (tonnes)	All other mortality caused by fishing (tonnes)
Combined	**Option 1**	3989	3249	31% ↓	193	221	326
	Option 2	3783	3063	35% ↓	193	221	306
	Option 3 *Status quo TACC with additional controls*	5561	4679	0%	193	221	468
TAR 1	**Option 1**	871	625	43% ↓ *	73	110	63
	Option 2	1106	839	24% ↓ *	73	110	84
	Option 3 *Status quo TACC with additional controls*	1390	1097	0%	73	110	110
TAR 2	**Option 1**	1383	1100	27% ↓	100	73	110
	Option 2	998	750	50% ↓	100	73	75
	Option 3 *Status quo TACC with additional controls*	1823	1500	0%	100	73	150
TAR 3	**Option 1**	623	539	48% ↓	15	15	54
	Option 2	602	520	50% ↓	15	15	52
	Option 3 *Status quo TACC with additional controls*	1174	1040	0%	15	15	104
TAR 7	**Option 1**	1112	985	5% ↓ *	5	23	99
	Option 2	1077	954	9% ↓ *	5	23	95
	Option 3 *Status quo TACC with additional controls*	1174	1042	0%	5	23	104

* Catch limit reductions are proposed to come exclusively from the eastern portions of the TAR 1 and TAR 7 stocks, referred to as TAR 1 (East) and TAR 7 (Cook Strait). This equates to approximately 50% reductions in catch for TAR 1 (East) and TAR 7 (Cook Strait).

Our approach

154. **The Option 3 Plan will be more enduring and consistent with the purpose of the Fisheries Act**

155. **The Plan is already delivering improvements**

It has already delivered a vast improvement on business as usual and a valuable management framework for inshore finfish fisheries, although the Plan was only developed and implemented one year ago. Ultimately it will increase the variety and effectiveness of fisheries management tools. This more sophisticated approach is only possible with the commitment of all affected parties.

156. The Plan's main management actions are summarised in Table 13. For complete technical details of these measures, refer to the comprehensive chapter in the Plan.

Table 13: Foundations of the Eastern Tarakihi Management Strategy and Rebuild Plan

Measure	Outcome for rebuild	Monitoring mechanism	Confidence	Performance indicators*
Catch spreading in TAR1 &7	Reduces catch on the East	ER/GPR and catch reports	Contracts commit to split ACE to east and west (as per hoki fishery)	90% quota shares signatory to agreement 80% compliance on water
Move-on Rules	Reduces juvenile catch and provides information for model	ER/GPR and catch reports (relates to TAX reporting)	Contracts stipulating details of triggers and actions for moving on	90% fishers signatory to agreement 90% compliance on water
Voluntary closed areas	Reduces juvenile catch	ER/GPR and catch reports	Contracts agreeing not to fish in the areas	90% fishers signatory to agreement 100% compliance
Reporting juvenile catch	Informs areas and levels to reduce juvenile mortality	ER/GPR and TAX code	Legal requirement Validation rules in reports	100% compliance
Gear selectivity	Reduces capture of smaller fish while retaining wanted catch	Gear database	Peer reviewed report	75% uptake after verification

*All progress on the performance indicators will be evaluated and reported on quarterly. This information will be publicly available.

157. **Enhancing management through improved science and research**

Our Plan complements the immediate pragmatic measures with a workstream of research projects and information to improve management. This approach will help develop further innovation and provide appropriate data for the next stock assessment. For complete technical details and reports of the research projects, refer to the comprehensive chapter in the Plan.

158. **An innovative management approach is possible where Iwi and stakeholders take responsibility for management**

Iwi fully accept that responsibilities are an inherent part of their rights. Long term sustainability is vital if their rights are to be protected and essential for those whose livelihoods are affected. Iwi, quota holders, fishers and industry bodies took immediate action once they knew the status of the eastern tarakihi revealed by the 2017/18 stock assessment. The collaborative approach they are taking is providing an opportunity to develop innovative ways of collecting data and improving fishing methods, including catch spreading and move-on rules.

159. **Adaptive management will sustain tarakihi and the people who catch them**

A long-term strategy with close monitoring allows everyone involved to make responsive management decisions. Actively managing this fishery enables a rebuild in which the fishery can still continue without risking the sustainability of the stock. Adaptive management plans enable improvements to be made as we learn more about the fishery. We intend to take every opportunity to increase the tools we have for fisheries management. The Plan will enable us to do this.

The sustainability problem for tarakihi is being addressed under current catch limits

160. **TACC cuts are not necessary - current catch levels are moving the stock towards Bmsy**

In 2018, the Minister reduced the TACC. It is not necessary to consider a further reduction until the next stock assessment, due in 2020/21. Current levels of catch are moving the stock in the right direction. This satisfies the Minister's obligations under the Fisheries Act.

161. **Any further cuts before the 2020/21 stock assessment would be premature and detrimental**

We want to ensure decisions are made to last. They must best reflect the historical trends, current situation and future aspirations for eastern tarakihi stocks. We want to understand the effectiveness of the steps we have already taken. Only then will we have more complete knowledge about both the east and west coast tarakihi fisheries.

The Plan's settings for the rebuild are well considered

162. **A stock-specific management target of 35% is appropriate for this fishery**

We consider a fish as important as tarakihi requires a well considered target. Rather than assuming a default target was appropriate, we contracted an assessment of eastern tarakihi to calculate a stock-specific Bmsy. The methodology of the assessment was approved by Fisheries New Zealand's Science Working Group. The results show a 35% target best meets the definition of Bmsy set out in the Fisheries Act.

163. **There is more than one way to rebuild a fishery**

The way to rebuild a fishery refers to the methods used to reduce catch or improve recruitment. Fisheries New Zealand's options propose a single method for the rebuild using TACC reduction. Our way is through the various measures in the Plan and an informed review of the TACC after the 2020/21 stock assessment. We consider the Plan sets out the most appropriate way to rebuild eastern tarakihi.

164. **Twenty years is an appropriate timeframe to rebuild this fishery**

Although the stock is currently tracking toward the target in 27 years, we are committed to rebuild the fishery to the target within a 20-year timeframe. The Fisheries Act does not dictate a specific rate to rebuild a fishery. While any further reductions may increase the rate of the rebuild there is no legal obligation on the Minister to do so. However, the Minister must consider the social, cultural and economic factors associated with such decisions to achieve the purpose of the Act.

While Options 1 and 2 will have an unacceptable and unnecessary impact on Iwi and the livelihoods of local communities

165. **Options 1 and 2 take a blunt approach through unnecessary TACC reductions**.

The proposed cuts are not needed for sustainability purposes or to meet the requirements of the Fisheries Act. But if they are implemented, Kiwi consumers and the fishing communities along the East Coast will lose out. This loss would be unnecessary but irreversible. For example, if fishers have to exit the industry because they can't generate enough income from less fish, it is highly unlikely they will be able to afford to return. Innovation in management won't be possible under these circumstances. These options are based on variations of the default settings to rebuild the stock. Our critique of the use of these defaults is set out in Part 1 of this response.

166. **The proposed TACC cuts will not improve management on the water**

The TACC cuts proposed in Options 1 and 2 take a "top down" approach that discounts the expertise and capability that fishers and rights holders can bring to management. We have already commented that those who hold this expertise are starting to make a difference in the fishery and will continue to do so if they are given the opportunity. The information provided by Fisheries New Zealand does not identify the benefits of measures we are carrying out and developing, such as catch spreading, move-on rules, voluntary closed areas, additional reporting and gear selectivity. It will be hard to build public confidence in the Plan unless the elements of the Plan and its benefits are properly analysed.

167. **A TACC reduction can't be applied in the way Options 1 and 2 propose**

Options 1 and 2 propose that a cut is applied to the TACC for the Eastern part of the QMA for TAR1 and TAR7. Achieving the rebuild under Options 1 and 2, in line with the projections for rebuild over different time-frames, require the cuts to come only from the Eastern parts of TAR1 and 7. However, Fisheries New Zealand is not able to enforce catch spreading in the East and West. This is something only industry can do. Consequently, under Options 1 and 2 Fisheries New Zealand would have to set the TACC at the Eastern limit for the rebuild. This will result in far greater reductions than set out in Table 12. The actual reductions compared to the Plans approach have been set out comprehensively in the submission put forward by Fisheries Inshore New Zealand.

168. **Social, cultural and economic impacts are significant**

The proposed reductions in Options 1 and 2 are heavy handed. They would lead to significant negative effects on rights holders. Iwi collectively own 38% of eastern tarakihi quota due to significant investments beyond the quota received through the Deed of Settlement.

169. More than 90% of tarakihi is sold locally to New Zealanders. It is a preferred fish for many people across the country. Because tarakihi is part of a mixed fishery it affects other commercial fisheries caught from depths of 30m to 350m. This affects the ability to catch, sell or buy a range of species in New Zealand. More than 80% of New Zealanders eat fish at least once a month (45% at least once a week) but less than 12% catch fish at least once a year. So, most New Zealanders are eating tarakihi caught by commercial fishers. Options 1 and 2 could take more than 1600 tonnes of tarakihi out of our fish shops and increase the price for the remainder. There is no New Zealand fish substitute available in the same quantities all year round. Tarakihi is caught throughout our

waters and is the backbone of many fishers' catch plans. The size of the proposed cuts will also have flow-on effects to the businesses the fishers provide fish to, as well as on all the supporting infrastructure to both fishers and processors and the wider community.

170. **Outstanding 28N claims in TAR2 continue to threaten Māori Fisheries Settlement**

Last year's decision created the potential for these rights to dilute settlement quota in the future. The extent of the additional cuts proposed would increase the likelihood that these rights may be discharged. For our full position on 28N rights please see section Part 3.3 of this response.

171. **Fisheries New Zealand has not proposed any changes to the deemed values associated with eastern tarakihi**

We consider this a necessary consideration when proposing Options 1 and 2 that would result in the reduction of the TACC by such a severe degree. Refer to our views on deemed values in Part 3.6 of this response.

5.0 Deemed Values

5.1 Overview

172. **Deemed values can either be set too high, too low, or about right**

A deemed value that is set too high may provide an incentive to discard fish. If deemed values are too low, fishers may be incentivised to land fish without balancing against ACE. Deemed values should be set with the best available information between the market value of fish and the price of ACE.

173. **Deemed values are not intended to defend the TACC**

Deemed values are not designed to be a mechanism for ensuring the commercial catch does not exceed the TACC. We support an approach that has an overriding purpose of encouraging the accurate reporting of catch, while discouraging the catch of stocks that individual fishers cannot cover with ACE[20].

Fisheries New Zealand is reviewing its deemed values for the following stocks:

- Bluenose (BNS7)
- Black cardinalfish (CDL5)
- Jack mackerel (JMA7)
- Kingfish (KIN3)
- Rubyfish (RBY5 and 6)
- Silver warehou (SWA3 and 4)

[20] For Te Ohu Kaimoana's approach on deemed values please refer to 3.6.

5.2 Bluenose (BNS7)

Our view

174. **We do not support the proposed increases to the deemed value rates for BNS7**

Proposed options

175. The proposed settings to deemed values for BNS7 are set out in Table 14.

Table 14: Proposed adjustments to the deemed value rates for BNS7 from 1 October 2019.

Stock	Option	Interim deemed value rate	Special annual differential rates ($/kg) for excess catch (% of ACE)							
			Annual and 100-105%	105-110%	110-120%	120-130%	130-140%	140-150%	150-160%	>160%
BNS 7	Current	2.70	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00
	Proposed	3.60	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00

Our approach

176. **The proposed change will set the annual deemed values rate too high**

Deemed values need to be set lower than what is being proposed to avoid disincentivising fishers from accurately reporting catch or creating incentives for discarding. Due to sustainability concerns in this fishery it is reasonable to set the deemed values at the higher end of the scale within the bounds of market value of fish and the ACE price.

177. **We do not support the ramping up of deemed values proposed in the special annual differential rates**

The proposed differential rates greatly exceed the most recent port price and are therefore are likely to be above the market price of fish. Ramping can lead to inaccurate reporting and discarding.

5.3 Cardinalfish (CDL5)

Our view

178. **We support the proposed changes to CDL5 deemed values**

Proposed options

179. The proposed settings to deemed values for CDL5 are set out in Table 15.

Table 15: Proposed adjustments to the deemed value rates for CDL5 from 1 October 2019.

Stock	Option	Interim deemed value rate	Annual deemed value rate	Annual differential rate ($/kg) for excess catch (% of ACE)
				>100%
CDL 5	Current	0.26	0.52	0.52
	Proposed	0.27	0.30	0.30

Our approach

180. **Deemed values should be set correctly to incentivise accurate reporting**

We support deemed values being used as a utilisation tool and therefore, should not be set higher than the market value of fish. The deemed values should be set close to the ACE price, in situations where TACC is being over catch and there are no sustainability concerns.

181. **We recommend that CDL5 be reviewed in next year's (2020) sustainability round**

CDL5 has a relatively low TACC of 22 tonnes. Catches of CDL5 are sporadic and likely to be unavoidable. As of March 2019, the available CDL5 ACE for the 2018/19 fishing year was 351% caught with greater than 90% of all landed fish caught during one fishing event.

5.4 Jack Mackerel (JMA7)

Our view

182. **We do not support the proposed increases to the deemed value rates for JMA7**

Proposed options

183. The proposed settings to deemed values for JMA7 are set out in Table 16.

Table 16: Proposed adjustments to the deemed value rates for JMA7 from 1 October 2019.

Stock	Option	Interim deemed value rate	Standard annual differential rates for excess catch (% of ACE)					
			Annual and 100-120%	120-140%	140-160%	160-180%	180-200%	>200%
JMA 7	Current	0.14	0.15	0.18	0.21	0.24	0.27	0.30
	Proposed	0.18	Special annual differential rates for excess catch (% of ACE)					
			Annual and 100-105%		105-120%		>120%	
			0.20		0.25		0.30	

Our approach

184. **Adjusting the deemed values rates to deal with the actions of one party in the fishery is the wrong approach**

In 2017/18 fishing year the landed catch exceeded the TACC by 4%. Over catch during the 2017/18 fishing year was driven by one significant JMA7 ACE holder, catching in excess of their ACE holdings by 15%. Section 77 of the Fisheries Act 1996 allows the Minister to constrain parties who are significantly over catching their entitlement. In these circumstances, the Fisheries Act should be used to hold the responsible party accountable rather than increasing deemed values.

5.5 Kingfish (KIN3)

Our view

185. **The current and proposed settings of deemed values are too high for KIN3**

Proposed options

186. The proposed settings to deemed values for KIN3 are set out in Table 17.

Table 17: Proposed adjustments to the deemed value rates for KIN3 from 1 October 2019.

Stock	Option	Interim deemed value rate	Annual differential rates for excess catch (% of ACE)					
			Annual and 100-120%	120-140%	140-160%	160-180%	180-200%	>200%
KIN 3	Current	8.00	8.90	10.68	12.46	14.24	16.02	17.80
	Proposed	4.00	**4.45**	**5.34**	**6.23**	**7.12**	**8.01**	**8.90**

Our approach

187. **The proposed change does not go far enough in reducing the deemed values**

The proposed change will set the annual deemed values for KIN3 above the 2017/18 port price of $3.62. The purpose of deemed values is not to ensure commercial catch does not exceed the TACC. Rather, it should encourage accurate reporting.

188. **We do not support the ramping up of deemed values proposed in the special annual differential rates**

The proposed differential rates greatly exceed the most recent port price and are therefore are likely to be above the market price of fish. Ramping can lead to inaccurate reporting and discarding.

189. **Over catch of the TACC in KIN3 indicates the TACC is set too low**

Catches of KIN3 previously exceeded the TACC by substantial margins. The TACC for kingfish was initially set to ensure this fishery did not become a target fishery by only allocating quota to cover unintended bycatch. This approach was inconsistent with the Deed of Settlement. The modest increase to the TACC has not addressed this situation. In our view, the TACC should be reviewed as part of next year's (2020) sustainability round.

5.6 Ruby fish (RBY5 & 6)

Our view

190. **We support the proposed decrease to the deemed value rates for RBY5 & 6**

Proposed options

191. The proposed settings to deemed values for RBY5 & 6 are set out in Table 18.

Table 18: Proposed adjustments to the deemed value rates for RBY5 &6 from 1 October 2019.

Stock	Option	Interim deemed value rate	Standard annual differential rates for excess catch (% of ACE)					
			Annual and 100-120%	120-140%	140-160%	160-180%	180-200%	>200%
RBY 5 RBY 6	Current	0.25	0.28	0.34	0.39	0.45	0.50	0.56
	Proposed	0.25	>100% 0.28					

Our approach

192. **The ramping of deemed values in the RBY5 and 6 fisheries is inappropriate**

RBY5 and 6 have TACCs of zero tonnes and this seems inconsistent with the Deed of Settlement. No ACE is available for either stock with which to balance catch, so fishers automatically incur deemed values when the catch RBY5 and 6. Any catch results in deemed value invoices at the highest possible rate of $0.56. This is above the market value.

5.7 Silver Warehou (SWA3 & 4)

Our view

193. **We support a decrease to the deemed values for SWA3 & 4**

Proposed options

194. The proposed settings to deemed values for SWA3 & 4 are set out in Table 19.

Table 19: Proposed adjustments to the deemed value rates for SWA3 & 4 from 1 October 2019.

Stock	Option	Interim deemed value rate	Special annual differential rates ($/kg) for excess catch (% of ACE)		
			Annual and 100-110%	110-130%	>130%
SWA 3	Current	1.57	1.74	$2.00	$3.00
	Proposed	0.63	0.70	$1.00	$2.00

Stock	Option	Interim deemed value rate	Special annual differential rates ($/kg) for excess catch (% of ACE)		
			Annual and 100-110%	110-130%	>130%
SWA 4	Current	0.50	1.22	1.74	$3.00
	Proposed	0.63	0.70	$1.00	$2.00

Our approach

195. **Deemed values for SWA3 and 4 should be set close to the ACE price**

As there are no sustainability concerns for this fishery, we believe deemed values should be set close to the ACE price.

196. **A review of deemed values for a fish stock does not substitute a review of the TAC/TACC settings**

Increasing the TACC for SWA3 and 4 will provide for sustainable utilisation without incurring unnecessarily high deemed values. Industry has signalled to Fisheries New Zealand that SWA3 and 4 should be included in this year's sustainability rounds (2019). Over the last 15 years, deemed value payments for both SWA3 and 4 have exceeded $13.7 million and have averaged around $919,000 per year. There is sufficient information to warrant the TACC increases without incurring ongoing and unwarranted deemed value payments.

197. **Adjusting the deemed values and monitoring the response will provide better information on the state of the fishery**

The reported landings of SWA3 and 4 generally decreased following the increase in deemed values. From 1 October 2007 the annual deemed values of both stocks had noticeably increased, and a more stringent differential schedule applied. Since 2007 catch of SWA3 has generally remained within the TACC. Catches of SWA4 have remained within the TACC except for the 2017/18 fishing year, where landings exceeded the TACC by 7%. By adjusting the deemed values and monitoring the response more accurate information will be obtained on the state of the fishery.

6.0 Reporting of catch from Amateur Charter Vessel

Our view

198. **We support the requirement for operators of amateur charter vessels to expand the reporting of their catch**

All catch of scallops, snapper and tarakihi from amateur charter vessels should be reported. These arrangements should be extended to blue cod in northern areas.

199. **We support extending the requirement to report the weight of retained catch**

The weight of all fin fish species and rock lobster should be reported in kilograms where catch reporting applies.

200. **We are not in support of requiring weight in kilograms of retained Scallops**

We consider this to be impractical and unlikely to be supported by operators. The obligation to report their catch by number is sufficient.

201. **We support the compulsory reporting of all catch and it's weight by amateur charter vessels and the recreational sector**

Ideally all recreational fishers should report their catch.

Proposed Options

202. Fisheries New Zealand proposes to include blue cod (FMAs 1, 9 and 10), scallops, snapper and tarakihi into the reporting scheme from 1 October 2019. The proposals are set out in Table 20.

Table 20: Proposed reporting changes to include blue cod (FMAs 1, 9 and 10), scallops, snapper and tarakihi into the reporting scheme from 1 October 2019.

Species	FMAs from which catch must be reported	
	Status quo	Proposal
Blue Cod	2, 3, 4, 5, 6, 7, 8	All
Scallops	None	All
Snapper	None	All
Tarakihi	None	All

203. Fisheries New Zealand proposes to require all amateur-fishing charter operators to report the actual or estimated weight (in kilograms). This applies to the retained catch for all species to which a catch reporting requirement applies. The proposals are set out in Table 21.

Table 21: Proposed expansion to weight reporting requirements to include all species and areas which require reporting including snapper, tarakihi and scallops from 1 October 2019.

Proposed additional species in bold	Estimate landings in kilograms	
	Status quo	Proposal
Bass and Hapuku	No	Yes
Bluenose	No	Yes
Blue Cod	No	Yes
Kingfish	No	Yes
Rock Lobster	No	Yes
Scallops	No	Yes
Snapper	No	Yes
Tarakihi	No	Yes
Pacific and Southern Bluefin Tuna	Yes	Yes

Our approach

204. **We support amateur charter vessels reporting more of their catch and the weight of their catch**

This information will better inform fisheries management. Focusing on the amateur charter vessel fleet is a good way of collecting useful catch information.

205. **Fisheries New Zealand needs to improve its current data collection methods**

Management of the QMS is supported by reliable catch and start position information from commercial fishers. Reporting has been through paper-based Catch Effort Landing Report data and is moving to Electronic Reporting and Geospatial Position Reporting. The scale and frequency of this reporting has grown significantly.

206. Reporting customary take is required under the Kaimoana and South Island customary regulations. However significant catch used for cultural purposes is most often caught under the recreational regulations (with no reporting). Our only estimates on recreational catch are through a combination of the five yearly National Panel Survey, fishery specific surveys and limited amateur charter vessel information. Expanding the species required to be reported and their estimated weights will improve the quality of data received from amateur charter vessel operators.

207. **Reporting catches and weight from amateur charter vessels should be made easy**

In the past Fisheries New Zealand has suggested that 80% of recreational catch is taken by 20% of the fishers, with the amateur charter vessel fleet accounting for a large portion of the 80%. Given the significance of the recreational share of the catch of some fish stocks, improved reporting should be a priority. Shifting the amateur charter vessel fleet from a paper-based system to a

digital platform would substantially improve the quantity, quality and availability of recreational catch information. This could easily be achieved through a modified version of the commercial electronic reporting and global position reporting.

208. We consider the Government should either require each amateur charter vessel operator to purchase the same equipment that is required for commercial vessels of the same size. As a step towards this the Ministry could provide the equipment to one amateur charter vessel operator in each region to trial. This would likely require an observer on board as part of the trial, to assess both the accuracy of reporting and additional effort required to provide the reporting.

209. **We recommend amateur charter vessels not be required to report the actual or estimated weight of scallops**

This information would be an unnecessary burden on skippers. Assumptions can be used to give a total weight estimate based on the total number of scallops reported.

210. **We recommend that there should be an increase in compliance for amateur charter vessels**

It is not clear to us that amateur charter vessel operators are consistently reporting on a regular basis. The current level of information suggests a drop in reporting rates, implying compliance. In comparison, the commercial sector is required to meet high compliance standards. Fisheries managers require high quality data to make management decisions and the current data is unusable. Fisheries New Zealand and Ministry for Primary Industries Compliance should establish an amateur charter vessel observer programme and combine this with increased compliance monitoring.

211. **We recommend amateur charter vessels report all interactions with protected species**

Understanding the interactions between the amateur charter vessels and protected species would fill a knowledge gap that currently exists. Resources have been developed through Southern Seabirds Trust and Conservation Services Programme to help identify and report interactions. We consider amateur charter vessel operators should be accountable for reporting all interactions with protected species.

Te Ohu
Kaimoana

From: [redacted]
To: FMSubmissions
Cc: [redacted]
Subject: Submission 1 October 2019 Sustainability Round Consultation
Date: Friday, 26 July 2019 4:34:47 PM
Attachments: image001.jpg
20190726 Te Runanga o Ngati Whatua Fisheries-NZ-Oct-sustainability-round-2019-Submission.docx

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Tena koe

Please find attached copy of Te Runanga o Ngati Whatua Submission on 1 October 2019 Sustainability Round Consultation.

If you have any queries in relation to this submission, please do not hesitate to contact the Runanga.

Kia ora

Image

Submission Form

1 October 2019 Sustainability Round Consultation

Fisheries New Zealand
Tini a Tangaroa

Once you have completed this form

Email to: FMsubmissions@mpi.govt.nz

While we prefer email, you can also post your submission to: Fisheries Management, Fisheries New Zealand, PO Box 2526, Wellington 6140, New Zealand.

Submissions must be received no later than 5pm, Friday 26 July 2019.

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

Submitter details:

Name of submitter or contact person:	[redacted] Manahautū
Organisation (if applicable):	Te Rūnanga o Ngāti Whātua
Email:	[redacted]
Fish stock(s) this submission refers to:	Tarakihi - TAR1 and TAR9
Your preferred option as detailed in consultation document (write "other" if you do not agree with any of the options presented):	Option 3

Official Information Act 1982

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

[redacted]
Te Rūnanga o Ngāti Whātua
PO Box 1784
Whangarei 0140

Phone: 09 470 0720

Submission:[1]

Details supporting your views:

1. We are fully committed to the kaitiakitanga of our resources.
2. Tarakihi is an important fish to us that supports local markets, recreational interests, employment and communities.
3. We have become aware of the status of the fishery. It is not where anyone wants it to be, but we do not believe there is a sustainability emergency here. Projections show that on current catches the stock will rebuild. We are concerned that making further cuts in 2019/20 are premature and do not allow enough time for the impact of the 25% cuts from last year to be felt.
4. Our TAR ACE holdings are an important asset that benefit both the social and economic wellbeing of our people. We want to protect both the fishery and the long-term resource that this provides Ngāti Whātua.
5. Noting this we support comprehensive management measures for the fishery. But we cannot support management proposals that ignore the complexity of the fishery and seek to unnecessarily take the fishery's biomass in only 10-12 years to a state it hasn't been close to for 45 years, when it's not required and doing so will halve the amount of prized tarakihi from customers throughout the country and decimate the inshore finfish fleet and impact the wider community.
6. On this basis **we support Option 3** and believe that through the Te Ohu Kaimoana, Fisheries Inshore New Zealand and Southern Inshore Fisheries TAR Management Strategy the challenge to provide a robust and effective rebuild plan for east coast TAR has been met.
7. We **do not support Options 1 and 2**. We consider these options to be simplistic and do not believe they reflect our values.

We would welcome the opportunity to speak to our submission should this be an option.

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

Tom Hussona
[redacted]

25.07.2019

Submission - Review of Sustainability Measures for Kina (SUR 1A, SUR 1B) for 2019/20
Fisheries New Zealand Discussion Paper No: 2019/12

1. Introduction.

I am a commercial diver, and I have dived throughout the areas in question (SUR1A SUR1B). I have seen firsthand that kina barrens are increasing in size and numbers and they are destroying a lot of otherwise healthy underwater environments.

I think these need to be monitored and contained before they make an even worse mark on the environment. By increasing the commercial catch, we will help reduce the negative impact these kina barrens have.

2. Questions for submitters on options for varying TACs, TACCs and allowances:

I Support Option 3 - a 50% increase to the TAC, TACC and other allowances.

The reasons why I support Option 3 are:

1. There are too many kina barrens in area 1A and 1B.

2. The kina catch has been taken at its maximum for the last 10+ years.

3. A small 20% increase – Option 2, is not enough to manage all of the kina barrens.

4. There are plenty of areas where customary and recreational people can harvest kina. In the commercially-managed areas the quality of kina significantly improves, so recreational and customary harvesters will benefit most from Option 3.

5. The original quota set for SUR 1A & 1B was low, because of lack of information on the fishery. We now have that information, including evidence of a major bounce back in the Bay of Islands kina fishery.

6. I agree with the Discussion Report that fine-scale reporting will allow for better management of the kina fishery, and that this is now possible because of the new Electronic Reporting system in place.

7. Local and international experience suggests that the level of harvest in Option 3 can be managed through fine-scale management.

The allowances for customary fishing for Option 3 are appropriate. This is because the quality of kina will improve in kina barrens which are managed by the additional fishing pressure.

The allowances for recreational fishing for Option 3 are appropriate. This is because the kina fishery and other fisheries will improve if kina barrens are better managed by stronger commercial and customary fishing.

Other sources of mortality are minimal because the commercial harvest is done by hand-gathering. The by-catch from other fishing methods (trawling, dredging) is minimal.

Summary:
I agree with the Discussion Report that under Option 3 catch limits could be easily adjusted in future if fine scale catch monitoring or other information suggests this is appropriate.

Regards

Tom Hussona

From: [redacted]
To: FMSubmissions
Cc: [redacted]
Subject: Submission re Tarakihi 1, 2, 3, 7 for 2019/20
Date: Thursday, 25 July 2019 2:16:36 PM

Dear Sir

Vela Quota No.1 Ltd owns the following percentage of the quota shares for Tarakihi:

TAR1 1.2%
TAR2 20.0%
TAR3 0.2%
TAR7 1.2%

The Vela Group is a private family owned fishing company. We own a wide range of inshore and deepwater quota shares which at current TACC levels generate approx. 26,000MT of ACE per annum. Historically we operated Norwegian deep sea factory trawlers in New Zealand as joint ventures but have not done so for greater than 10 years now. Hence the Vela Group is a quota owner that generates its income from the annual lease of ACE, and via the purchase and sale of fish and mussels for export to our overseas client base. We do not operate or own any fishing vessels.

The writer attended the FNZ consultation meeting in Mangere on 11 July 2019. Vela Quota No.1 Ltd is a member of Fisheries Inshore New Zealand that is submitting on behalf of industry, but Vela wishes to make the following additional submission in their own right.

1. We support option 3, which is effectively a combination of the TACC adjustments and industry management of the rebuild, given the Minister has already cut the TACC by 25% at 1st October 2018.
2. We do not wish to see any further TACC cuts. The financial impact on Vela of the 2018 cut can be measured financially as approx. $130,000. While this is a significant loss of revenue we are not concerned about that in the short term as we are in the fishery for the long term. The Vela family own a portion of this fishery and many others and it is an asset in perpetuity for generations of the family to come. It would be completely senseless for Vela to risk the long term sustainability of this stock.
3. We are however more concerned about the immediate downstream impact on the fishermen and their families whom catch that ACE. If there are more TACC cuts of the levels suggested in options 1 and 2 (30 – 35%) we know that many of the smaller fishermen will go out of business. That will permanently reduce the fishing capacity required for this fishery going forward and have a detrimental impact on the wider fishing fleet, and associated businesses, and the community.
4. The timelines and target proposed by FNZ do not seem logical. Information presented by FNZ shows the fishery has reduced from 27% of its biomass in 1975 to 16% currently, an 11% reduction in 45 years. While we agree a rebuild is necessary the options 1 and 2 suggest the fishery must be rebuilt to 40%, and increase of 24% over a period of 11 – 12 years. So on a comparative basis to what has occurred since 1975 the options suggest an increase of greater than double the decrease in the biomass (+24% versus -11%) in approximately one quarter of the time of the decrease (11-12 years versus 45 years).

5. FNZ stated at the meeting they believe the fishery is currently rebuilding, and that is without any consideration of the industry management measures. We strongly submit that the recovery timeline should not be condensed to an unrealistic period of 10-12 years, and that industry management measures be given the opportunity to have a favourable impact, before any further TACC cuts are considered.

Please contact the writer if you require any further information or clarification.

Regards

[redacted]
On behalf of the Vela Group
PO Box 10056, Te Rapa
12 Sir Tristram Ave, Hamilton
Ph [redacted]
Fax [redacted]
Mob [redacted]
[redacted]

From:	[redacted]
To:	FMSubmissions
Subject:	2019 review of tar sustainability measures.
Date:	Friday, 26 July 2019 4:49:17 PM
Attachments:	Image (22).jpg

Hello,

Find attached submission on the FNZ proposal for TACC and TAC changes for the East Coast tarakihi fishery.

Regards,

[redacted]

[redacted]

WCPCFA.

WHITIANGA & COROMANDEL PENINSULA
COMMERCIAL FISHERMEN'S ASSOCIATION

[redacted]
Ph [redacted]
Mobile- [redacted]

26/07/19

Ministry for Primary Industries.
Charles Ferguson Building.
34-38 Bowen St
Pipitea,
Wellington.

Submission on the proposal for TACC and TAC changes
for the East Coast tarakihi fishery.

This is an association of fishers from the Tauranga to Auckland region, with this years membership currently sitting at 35.
A large majority of our fishers are inshore/coastal bottom longliners as well as trawlers and Danish seine. operators.
It is common knowledge that tarakihi make up a large proportion of the coastal trawl catch.
Tarakihi is also an important specie in the coastal longliners catch plan.
Our fishers have worked hard to incorporate the industrys "Eastern tarakihi management stratagy and rebuild plan" which involved a TACC quota reduction this last year.
The science shows that this 25% reduction in east coast tarakihi will give the stock a rebuild over time.
Also trawl fishers are now getting better catch selectivity through consistent gear modifications and adopting" the move on rule " when they strike smaller tarakihi.
Leaving smaller tarakihi on the grounds will also help the rebuild window and this will happen on a rising scale as fishers are very good at changing fishing gear to improve selectivity which has come about through the increased drive for better fish quality.
Industry will also get better at documenting these types of things which will benefit the science.

The FNZ proposal of a further 50% TACC and TAC reduction is unnecessarily harsh and will result in trawl and bottom longline vessels faced with uneconomic catch plans.
This will probably result in mortgaged up fishers exiting the industry causing disruption to their families and the communities where they lived.

[redacted]
Whitianga/Coromandel Peninsula Commercial Fishermans Association.

[redacted]

From: [redacted]
To: FMSubmissions
Subject: SUR1A SUR1B Increase
Date: Friday, 26 July 2019 1:29:53 PM
Attachments: [redacted] pdf

Please see attached submission from Wiremu Davis

[Full Name] Wiremu Kipa Davis
[Address] [redacted]
[Phone] [redacted]
[email address] 26.07.19

[date] [redacted]

Submission - Review of Sustainability Measures for Kina (SUR 1A, SUR 1B) for 2019/20
Fisheries New Zealand Discussion Paper No: 2019/12

1. Introduction.

[Briefly describe how you are involved in the commercial kina industry

* Trustee Ngawai Pakihingakaka Maori trust
* Hauraki Maori trust board
* Ngati Hei trust
* Pare Hauraki Fisheries trust
* Marine and Coastal Area (MACA) claims
* Wai 110 Treaty settlement.
* Registered with Tokm.

2. Questions for submitters on options for varying TACs, TACCs and allowances:

- *Which option(s) do you support for revising the TACs and allowances? Why?*

I Support Option 3 - a 50% increase to the TAC, TACC and other allowances.

The reasons why I support Option 3 are:

1. There are too many kina barrens in area 1A and 1B.

2. The kina catch has been taken at its maximum for the last 10+ years.

3. A small 20% increase – Option 2. is not enough to manage all of the kina barrens.

4. There are plenty of areas where customary and recreational people can harvest kina. In the commercially-managed areas the quality of kina significantly improves, so recreational and customary harvesters will benefit most from Option 3.

5. The original quota set for SUR 1A & 1B was low, because of lack of information on the fishery. We now have that information, including evidence of a major bounce back in the Bay of Islands kina fishery.

[redacted]

6. I agree with the Discussion Report that fine-scale reporting will allow for better management of the kina fishery, and that this is now possible because of the new Electronic Reporting system in place.

7. Local and international experience suggests that the level of harvest in Option 3 can be managed through fine-scale management.

- *If you do not support any of the options listed, what alternative(s) should be considered? Why?*

N/A. I support Option 3.

- *Are the allowances for customary fishing appropriate? Why?*

The allowances for customary fishing for Option 3 are appropriate. This is because the quality of kina will improve in kina barrens which are managed by the additional fishing pressure.

- *Are the allowances for recreational fishing appropriate? Why?*

The allowances for recreational fishing for Option 3 are appropriate. This is because the kina fishery and other fisheries will improve if kina barrens are better managed by stronger commercial and customary fishing.

- *Are the allowances for other sources of mortality appropriate? Why?*

Other sources of mortality are minimal because the commercial harvest is done by hand-gathering. The by-catch from other fishing methods (trawling, dredging) is minimal.

- *What other management controls should be considered for both recreational and commercial fishers? Why?*

1. Commercial fishers should be allowed to use UBA. It is safer, more cost-effective and allows for better management of the fishery through selective harvesting

2. I believe that customary and recreational catch reporting needs to be improved.

3. I agree with the Discussion Report that under Option 3 catch limits could be easily adjusted in future if fine scale catch monitoring or other information suggests this is appropriate

Yours faithfully

[Name and signature] [redacted]

26.07.19

WIREMU KIPA DAVIS