Ministry for Primary Industries
Manatū Ahu Matua

Review of Sustainability Measures and Other Management Controls for Selected Inshore Fishstocks

Final Advice and Recommendations for the TAC, Allowances and TACC of MOK 3

MPI Information No: 2014/19

ISBN No: 978-0-478-43729-4 (online)
ISSN No: 2253-394X (online)

August 2014

New Zealand Government

Growing and Protecting New Zealand

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Contents

Page

Executive Summary **1**

Key Considerations **3**
Need to Act 3
Stock Status 3
Biological Characteristics of Blue Moki 3
Relevant Fishery Information 4
Commercial Fishery 4
Other Management Controls 6
Primary Commercial Fishing Methods 6
Māori Customary Fishery 8
Other Sources of Fishing-Related Mortality 9
Other Key Considerations 9

Consultation **10**
Submissions 10
Support for Option 1 10
Support for Option 2 10
Other Stakeholder Views 10

Discussion **12**
Option one 12
Option two 12
Allowances 13

Analysis of Options **14**
Option 1 14
Option 2 (MPI Preferred option) 14
Other Management Measures 15

Assessment against Statutory Obligations **16**
Purpose of the Act 16
General Obligations 16
TAC 16
Environmental Principles 17
Section 10 - Information principles 17
Section 11 - Considerations 18
TACC and Allowances 19

Conclusions **20**

Recommendations **21**
Option 1 21
Option 2 21

Appendix 1: Submissions **22**

REVIEW OF THE SUSTAINABILITY MEASURES AND OTHER MANAGEMENT CONTROLS FOR BLUE MOKI (MOK 3)

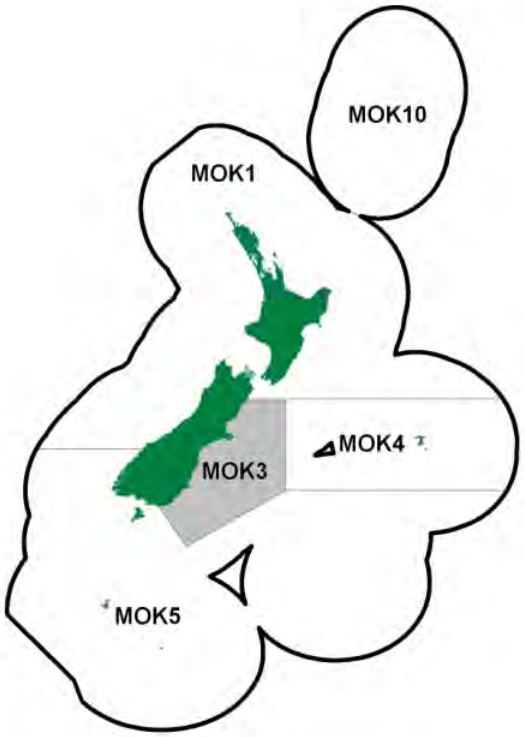


Figure 1: Quota Management Areas (QMAs) for blue moki - MOK 3 is indicated by shading.

Executive Summary

1. There is currently no Total Allowable Catch (TAC) or allowances set for MOK 3. MPI's policy in such cases is to recommend the setting of a TAC and allowances when a review is undertaken, even if you decide to retain the current TAC.

2. Over the last six years commercial catch of MOK 3 has shown an increasing trend. The Total Allowable Commercial Catch (TACC) has been over caught for the last four years resulting in increasing deemed value payments. $43,000 of deemed value payments were paid by commercial fishers for overcatch in the 2012-13 fishing year.

3. Management response to ongoing overcatch of the TACC is either to increase deemed value rates to increase incentives for fishers to land against Annual Catch Entitlement and/or review catch limits.

4. There is a lack of information on sustainable yield for MOK 3. Nonetheless, historical catch and effort levels have been low meaning the stock could be under exploited. In addition, catch has been increasing despite closure of large areas of MOK 3 to set net fishing (the main target method), which may indicate an increase in abundance. Such an increase in abundance would accord with increased levels of bycatch being taken in other fisheries. Accordingly, MPI have consulted on changes to catch limits for this fishery.

5. This paper presents two options for setting and allocating the Total Allowable Catch (TAC) for blue moki in MOK 3 (see figure 1) following a review of the management of

the fishery. These options differ from initial proposals and take into account additional information obtained through and following consultation.

6. The available information on MOK 3 is insufficient to estimate the biomass that will produce the maximum sustainable yield (B_{MSY}) or the status of the stock in relation to B_{MSY}. Where estimates of B_{MSY} are not available, section 13(2A) of the Fisheries Act 1996 (the Act) requires you to use best available information to set a TAC that is not inconsistent with the objective of maintaining the stock at or above, or moving the stock towards or above, a level that can produce the maximum sustainable yield.

7. MPI consulted on two management options in an initial position paper (IPP). Based on the submissions received and new information, the MOK 3 options have been revised in this final advice for your consideration, as shown in Table 1 below.

Table 1: Proposed TACs, TACCs and allowances for MOK 3

Option			Allowances		
	TAC (t)	TACC (t)	Customary Māori (t)	Recreational (t)	Other sources of fishing - related mortality (t)
Current	-	127	-	-	-
Option 1	161	127	1	20	13
Option 2 (MPI Preferred)	197	160	1	20	16

8. MPI recommends Option 2, which sets the TAC at a level that provides for an increased TACC as well as allowances set on best available information. The TACC increase would increase the availability of Annual Catch Entitlement to better cover the commercial bycatch of MOK 3 in mixed fisheries and recognises that fishery has likely been subject to low fishing pressure. MPI recommends that this option is linked to an appropriate fishery and stock monitoring programme (in conjunction with the biologically-linked MOK1 stock) to provide improved information for fishery management.

Key Considerations

NEED TO ACT

9. Since blue moki was brought into the QMS in 1986, the commercial catch of MOK 3 has generally fluctuated between 60 and 100 tonnes.

10. Over the last six years, commercial landings of MOK 3 have shown an increasing trend, with the TACC being over caught for the last four years (see Figure 2). In the most recent (2012 - 13) fishing year, these landings reached 159 tonnes, exceeding the current TACC of 127 tonnes by 25%. As a result, increasing deemed value payments are being incurred by commercial permit holders.

11. MOK 3 is a low value and low information fishery. The amount of catch and value of that catch is insufficient to warrant significant research spend. The general approach to managing this type of stock is to minimise management costs by using catch trends as the key monitoring tool. Declining catch trends or landings in excess of the TACC are used as a trigger for further investigation and consideration of review.

12. Historic low levels of effort and catch in MOK 3 suggest a stock which may be under exploited. The likely low level of exploitation combined with increasing over catch of the TACC despite significant South Island wide closures to methods used to target moki suggest a review of the catch limit is warranted.

STOCK STATUS

13. The available information on MOK 3 is insufficient to estimate B_{MSY} or the status of the stock in relation to B_{MSY}.

14. MOK 1 and MOK 3 are considered likely to be part of the same biological stock. The 2013 Plenary reported for the MOK 1 and MOK 3 stocks that fishing mortality has probably been low for more than two decades. This is based on low estimates of fishing mortality in 2005-06 and stable catches over the previous 14 years.

BIOLOGICAL CHARACTERISTICS OF BLUE MOKI

15. The New Zealand blue moki *(Latridopsis ciliaris)* is present around much of New Zealand, but is most common in the south.

16. Blue moki grow rapidly at first, attaining sexual maturity at 40 cm fork length (FL) at 5 – 6 years of age. Growth then slows, and fish of 60 cm FL are 10 - 20 years old. With a maximum age of around 50 years, blue moki are vulnerable to over-exploitation.

17. Many adult blue moki take part in an annual migration between Kaikoura and East Cape, crossing between the MOK 3 and MOK 1 quota management areas (QMA). The migration begins in late April/May as the fish move northwards. Spawning takes place in August/September in the Mahia Peninsula to East Cape region (the only known spawning ground) with fish then returning to Kaikoura.

18. This regular population interchange between MOK 3 and MOK 1 creates some uncertainty around the nature of the stock structure within these QMAs. The 2013 Fisheries Assessment Plenary describes one biological stock around the North Island and the South Island north of Banks Peninsula. The well-defined spawning migration

means that there is likely to be interdependence between the MOK 3 and MOK 1 QMAs and increased catches in MOK 3 might have an impact on other areas.

RELEVANT FISHERY INFORMATION

19. Blue moki stocks are managed under the Draft National Fisheries Plan for Inshore Finfish (the Finfish Plan)[1]. The Finfish Plan is an MPI policy document that came into operation from July 2011. It sets out management objectives for inshore finfish stocks, including MOK 3. Within the Finfish Plan, stocks are grouped, with management approaches and objectives tailored for each group.

20. MOK 3 is in Group 6 in the Finfish Plan. Management objectives for Group 6 stocks are to:

- Enable utilisation of each stock;
- Ensure catch is at a level that is sustainable;
- Protect, maintain, and enhance habitats of significance to fisheries management; and,
- Minimise adverse effects of fishing on the aquatic environment.

21. As fishing pressure on Group 6 stocks is considered to be relatively low, the general approach to managing these stocks is to minimise management costs by using catch trends as the key monitoring tool. Declining catch trends or landings in excess of the TACC are used as a trigger for further investigation and consideration of review. MOK 3 falls in the latter category with commercial catch exceeding the TACC over the past four fishing years.

22. There is uncertainty associated with using commercial catch as a monitoring tool for stock status. In cases where this is the best available information, a cautious approach should be taken to adjusting catch limits, particularly for species like blue moki where the biological characteristics make them vulnerable to the effects of over fishing.

COMMERCIAL FISHERY

General

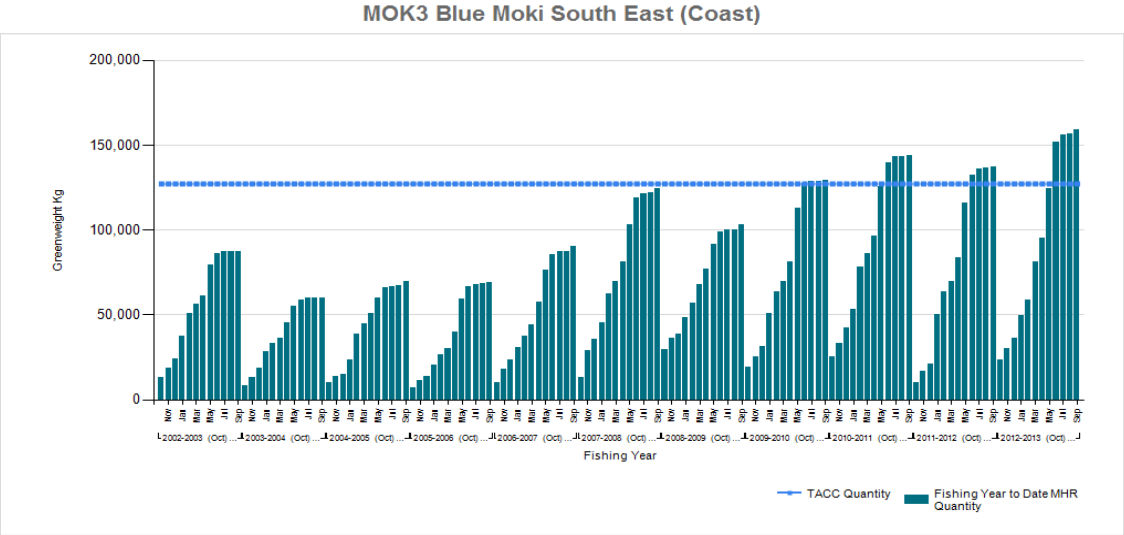
23. Blue moki is currently a low-value commercial fishery, primarily caught within MOK 3 as a bycatch of the inshore set net and bottom trawl fisheries. Reported target fishing for blue moki within MOK 3 is very low and only accounts for approximately 15% of the total annual catch. Blue moki is classified by the representative industry organisation Southern Inshore Fisheries Management Company Limited as a medium priority stock. It is also considered a stock that can limit the targeting of other economically important species because of the inability to source the necessary ACE to cover blue moki bycatch.

Catch

24. Figure 2 shows the cumulative monthly reported commercial catch of MOK 3 for the fishing years since 2002-03. The fishery has shown a generally increasing trend in catch since around 2003. The TACC has been exceeded over the last four years.

[1] The Fisheries Plan has not been formally approved under the Act.

Figure 2: Reported Catch Landings from Monthly Harvest Returns and TACC (t) for MOK 3 from the fishing years 2002/03 to 2012/13.



Port Price and Deemed Values

25. The most recent estimate of port price for MOK 3, based on the 2012/13 Port Price Survey, was $1.03 per kg. Using this price as a nominal figure for landed value, the estimate of the current annual return from the MOK 3 fishery, at full utilisation of the current TACC, is approximately $131,000. The quota value for MOK 3 in 2012-13 was $2,238 per tonne, giving a total quota asset value of approximately $284,000.

26. Deemed value rates are a monetary amount per kilo that must be paid for any quota species that is caught, but is not balanced by annual catch entitlement (ACE). There are interim and annual deemed values. Interim deemed values are payable within a fishing year, and annual deemed values are payable to cover end-of-year catch not balanced by ACE. Annual deemed value rates escalate with increasing levels of over catch as a tool to deter catch in excess of available ACE.

27. The current MOK 3 interim deemed value is $0.79. The annual deemed value rates range from $0.88, up to a maximum of $1.76. With a port price of $1.03, a financial disincentive for landing fish above the available ACE only exists if the fisher takes more than 120% of his/her ACE holding. Between 100% - 120% over catch it is still profitable to land blue moki without ACE to cover it. This may be part of the reason why the catch has exceeded the TACC over the past four fishing years.

28. The total MOK 3 deemed value bills for the last five years are shown in Table 2 below. The substantial increase in 2012-13 resulted from a few fishers exceeding the available ACE by a sufficient margin to attract the higher ‘ramped’ deemed value rates.

Table 2: Total annual deemed value bills for the past 5 years (2008-09 to 2012-13) for MOK3.

Year	Annual Deemed Value Bill
2008-09	$39.56
2009-10	$791.24
2010-11	$4,506.08
2011-12	$4,443.35
2012-13	$43,501.53

OTHER MANAGEMENT CONTROLS

29. The additional management controls affecting commercial take of blue moki include:

- A commercial minimum legal size (MLS) of 40 cm;
- Area restrictions for certain fishing methods; and,
- A minimum set net mesh size of 114 mm for target fishing.

PRIMARY COMMERCIAL FISHING METHODS

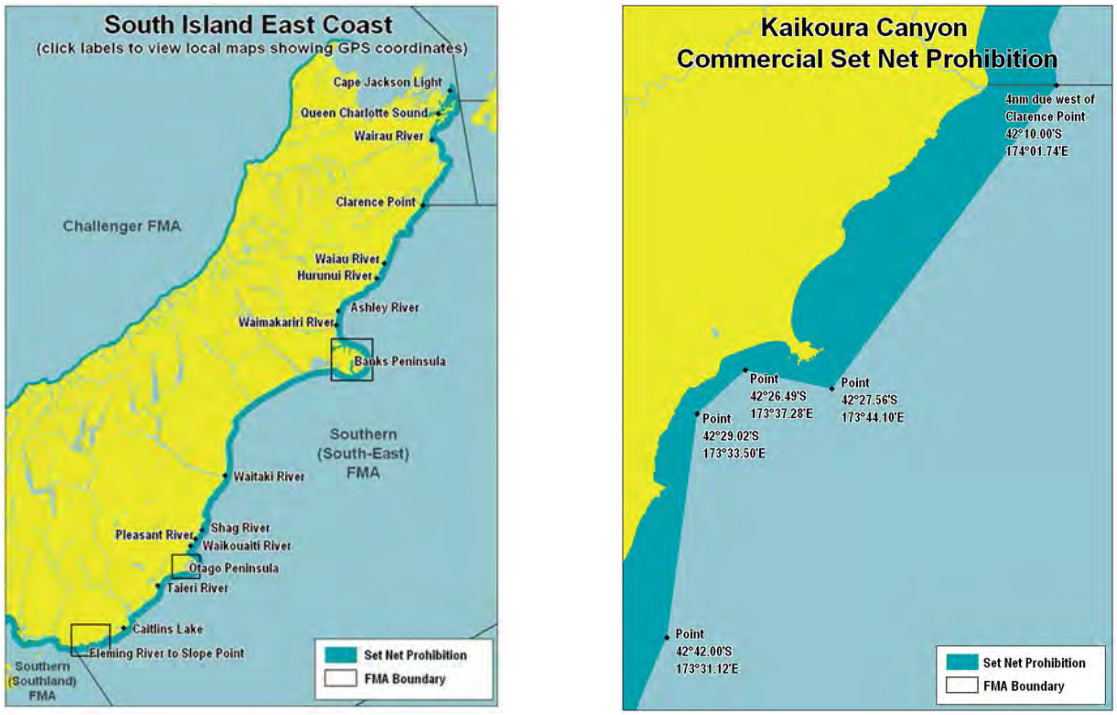
Set Netting

30. Commercial set netting makes up the bulk of blue moki catch in MOK 3. The primary target finfish species in the area include tarakihi, hapuku/bass, and bluenose. There is also an active shark fishery targeting school shark, rig, and spiny dogfish. While there is some targeted blue moki set net fishing, the majority is caught as a bycatch of the above target fisheries.

31. In 2008, as part of the Hector's dolphin threat management plan, a set net ban was implemented, extending along the entire coastline of the MOK 3 area (see Figure 3(a)). This closure extends 4 nautical miles out to sea for the majority of its extent; however, in the region of Kaikoura the offshore extent is reduced to follow the contours of the Kaikoura Trench (see Figure 3(b)).

32. The closure has reduced commercial set net access to most of the coastal MOK 3 fishery. However, in Kaikoura, due to the trench being relatively close to shore, the level of access to blue moki habitat is still high. The biological migration characteristics of blue moki in conjunction with the reduced closed area and the presence of an active commercial set net fishing fleet, makes Kaikoura a significant area for MOK 3 commercial catch. This also provides a possible counter-argument to the suggestion that the set net closure has significantly reduced commercial blue moki catch by set net.

Figure 3: 2008 Set net closure implemented along the South Island East Coast including all of MOK 3. Includes reduced closure area around Kaikoura.



Inshore Trawl

33. The inshore bottom trawl fishery which operates within MOK 3 primarily targets species such as red cod and flatfish that live close to the seafloor. Being a mixed-species fishery there is inevitable bycatch of co-habiting species such as blue moki.

34. The trawl bycatch of blue moki in MOK 3 has shown a gradual increase over recent years and in the last fishing year (2012 - 13), trawl caught fish accounted for approximately 15% of the total MOK 3 commercial catch.

35. Trawl vessels are constrained by the following spatial closures within MOK 3:

- **Pegasus Bay**: Trawling is prohibited from all the inshore waters of Pegasus Bay between the Waimakariri River and Godley Head, and along the coast to East Head.

- **Salmon Conservation Area**: No trawl vessel over 23 m in length or with a power rating of 250 Kw or more may fish within 7 nautical miles of an area of Banks Peninsula commencing at Godley Head and proceeding around to Akaroa Head between 7 December and 14 February each year.

- **Two nautical mile restriction**: Trawling is restricted within two nautical miles of the South Island coast from Slope Point (south east of Haldane Bay) to Clarence Point (north of Kaikoura).

- **Trawl vessels over 46 m**: All trawl vessels over 46 m are excluded from the Canterbury Bight to a point at sea south east of Banks Peninsula. From that point on, the boundary of the closure proceeds 13 nautical miles seaward of the territorial sea to the northern boundary of FMA 3.

Recreational Fishery

36. Popular with recreational fishers, blue moki is considered an important recreational species. Blue moki are targeted and caught by rod and reel, set netting, and spear fishing.

37. Current recreational management controls in the MOK 3 area include:

- A MLS of 40 cm;
- A daily bag limit of 15 as part of a wider combined finfish limit of 30;
- Area restrictions for certain fishing methods; and,
- A minimum set net mesh size of 114 mm that must be used in order to take blue moki.

38. Historically, the primary method used by recreational fishers to take blue moki was set net. The Hector's dolphin protection area closure introduced in 2008 (outlined in Figures 3(a) and 3(b)) also applies to recreational fishers. This closure reduced recreational set net access to the fishery. This is likely to have substantially decreased the level of recreational take of blue moki in MOK 3.

39. Information presented in the IPP of the draft results from the 2011-12 National Panel Survey suggested that recreational take could be less than 1 tonne. This was, however, considered likely to be an underestimate due to the design of the survey. Updated information from the National Panel Survey shows that a more realistic estimate of recreational take is approximately 12 tonnes. This includes approximately 10 tonnes taken by spear fishing and approximately 2 tonnes taken by rod and reel.

40. It is considered likely that the level of recreational catch will increase over time if the abundance of blue moki increases in the area. Increases in the human population and subsequent fishing effort are also likely to contribute to increased recreational take.

MĀORI CUSTOMARY FISHERY

41. Blue moki is listed as a taonga species in the Te Waipounamu Fisheries Plan of the Te Waka a Maui me Ona Toka Forum.

42. Māori Customary fishing within the MOK 3 area is administered under the Fisheries (South Island Customary Fishing) Regulations 1999. The area falls within the rohe moana of Te Runanga o Ngai Tahu. Under the regulations, customary harvest is authorised by nominated Tangata Kaitiaki/Tiaki and the total catch taken is reported back to MPI.

43. Information from MPI databases on the reported customary take of blue moki within MOK 3 shows very low catch levels (around 20 kg in total).

44. It is possible that most of the blue moki taken for customary purposes is harvested within the recreational limits. In this case, no customary permit or harvest reporting is required.

OTHER SOURCES OF FISHING-RELATED MORTALITY

45. There is both anecdotal and recorded information to suggest that blue moki are returned to the sea during commercial fishing operations. There are a range of factors that contribute to discarding activity.

46. Foremost is the legal requirement for all commercially caught blue moki below the MLS of 40 cm to be returned to the sea. While there is no information on survivorship after release for this species, it is expected that the survival rate is likely to be low. This is because the majority of commercial catch is by the methods of set net and bottom trawl, which commonly cause damage to the fish during the catching and retrieving of the fish to the vessel.

47. There is no available information on the catch ratio of legal-size fish to fish below the MLS. This is because there is no requirement to record fish below the MLS returned to the sea. In addition, given that blue moki is primarily a bycatch species, the input controls centred on selectivity such as cod end and set net mesh size are unlikely to be optimised for this species.

48. Blue moki is easily damaged in fishing gear and as a result fish quality can be difficult to maintain, particularly when using the fishing methods of set net and bottom trawl. Given that it is already a low value species, damage to fish can easily make it uneconomic for fishers to land blue moki. Discarding of unwanted and uneconomic quota species has been identified as an issue of concern within inshore fisheries in Fisheries Management Area 3 (FMA 3) and has been at the centre of a number of Compliance actions and Fisheries Management initiatives.

49. Section 20 of the Act requires that, when setting the TAC, an allowance must be allocated for other sources of fishing-related mortality. It was proposed in the IPP that a setting at or above 10% of the TACC would be prudent and in keeping with allowances made for similar fisheries. MPI recommends setting an allowance of 10% of the TACC to account for fishing-related mortality would be appropriate. The allowance could be revised in future reviews if new information becomes available.

OTHER KEY CONSIDERATIONS

50. When making a decision concerning the TAC for a stock, you must have regard to the interdependence of stocks, the biological characteristics (discussed above), and any environmental conditions affecting the stock.

51. Given the cross-QMA migratory behaviour of blue moki between MOK 1 and MOK 3, there is likely to be interdependence between these stocks.

52. At this time, there is no information to suggest that the proposed management options would have an adverse effect on the MOK 1 stock, however, any future information gathering should take this interdependence into account.

Consultation

53. An IPP was released on 26 May 2014. The standard consultation process for IPPs was followed.

54. MPI consulted on two options as summarised in Table 3 below:

Table 3: TACs, TACCs and allowances for MOK 3 proposed in the IPP.

Option	Allowances				
	TAC (t)	TACC (t)	Customary Māori (t)	Recreational (t)	Other sources of fishing related mortality (t)
Current	-	127	-	-	-
Option 1	146	127	1	5	13
Option 2	187	160	1	10	16

SUBMISSIONS

55. MPI received six submissions on the IPP, four from the recreational sector and two from Industry.

56. All submissions are included in Appendix 1 for your reference.

SUPPORT FOR OPTION 1

57. Two submissions from the recreational sector supported Option 1. Key points made in submissions included:

- The 5 tonne allowance for recreational fishers was sufficient in light of the 2008 set net ban;
- The current TACC of 127 tonnes should be retained; and
- Further information should be collected before informed management decisions can be made.

SUPPORT FOR OPTION 2

58. Two submissions from the commercial sector supported Option 2. Key points made in submissions included:

- Support for increasing the TACC from 127 tonnes to 160 tonnes;
- Industry would be amenable to working with MPI to increase the available information for the MOK 3 stock; and,
- Characterisation work for MOK 1 and MOK 3 should be carried out for 2015 at an approximate cost of $20,000 (direct purchase by Industry).

OTHER STAKEHOLDER VIEWS

59. The remaining two recreational sector submissions rejected both options in favour of other management strategies. Key points made in submissions included:

- The increases in commercial catch levels of MOK 3 are primarily a result of changes in fishing effort rather than a demonstrable increase in abundance;

- In the case of mixed-species fisheries, fish stocks should be reviewed together and the TACCs should be balanced to constrain access to the most vulnerable species;

- The stock dynamics between MOK 1 and MOK 3 due to annual spawning migrations crossing the QMA boundaries required that they should be considered together;

- The allowances set under the proposed options do not adequately provide for recreational interests;

- The increase in commercial MOK 3 catch is a result of increased bycatch related to the 2006 increase in the TAR 3 TACC made under the Adaptive Management Programme.

- A reassessment and reduction of the TAR 3 TACC should be considered in order to constrain the take of MOK 3 below the current TACC; and,

- Prior to the 2008 set net closure, MOK 3 was an important recreational fishery and take was potentially as high as 70 tonnes. It was proposed that despite the management controls in place, the recreational take will progressively increase as fishers develop new ways to access and utilise the fishery in spite of the closure.

Discussion

OPTION ONE

60. Option one places greatest weight on the lack of scientific information around sustainable yield for MOK 3 and the potential links between MOK 1 and MOK 3. As MOK 1 is not showing any signs of an increase in abundance you could be cautious about allowing any increase in MOK 3. You could choose option one if you considered the current level of commercial catch is not sustainable based on best available information.

61. Option one would require future actions to constrain the commercial catch within the TACC. In this case, consideration could be given to revising the deemed value rates or reviewing the TACCs for associated target species so available ACE levels for target species are balanced with MOK 3 bycatch levels. MPI will provide you further advice on these matters if you choose this option.

62. Retaining the current TACC despite the increasing catch levels may create (or exacerbate) a scenario where the availability of MOK 3 ACE becomes limiting in other target fisheries. This may provide increased incentive for discarding, particularly as ACE availability diminishes near the end of the fishing year. Corresponding fisheries management and compliance strategies would need to be considered to address this issue.

OPTION TWO

63. MPI note that the lack of a reliable estimate of sustainable yield does not prevent you from increasing the catch limit where you consider the overall risk to sustainability of that action acceptable. MPI consider the following information particularly relevant to your considerations:

    a. there have been low levels of historic catch in MOK 3 which means the stock could be underutilised;

    b. commercial catch has been increasing despite introduction of large area closures to set net (the primary method used to target the species) which may indicate an increasing biomass;

    c. There is no information to indicate a sustainability concern at recent levels of commercial catch (equating to the TACC proposed under option two) which have been above the current TACC;

    d. Setting the TACC at the level of current catch would increase the amount of value obtained from the fishery by reducing the costs of fishing (reduced deemed value payments).

64. Industry submissions labelled the initially proposed catch sampling programme as cost prohibitive, and instead proposed that catch per unit effort (CPUE) and characterisation work should be carried out in MOK 1 and MOK 3 in 2015, at an approximate cost of $20,000 to be direct purchased by SIFMC and FINZ.

65. MPI appreciates Industry's suggested contribution towards research in the MOK 3 fishery. However, it is important to note that CPUE has been examined previously and

has not been accepted as an index of abundance. MPI recommends that Option 2 should be linked to an appropriate monitoring programme, in conjunction with MOK1, to provide improved information for managing the stocks. MPI is open to working with Industry to develop options for an appropriate fishery and stock monitoring programme.

ALLOWANCES

66. Prior to the 2008 set net closure, the primary recreational method for taking blue moki was set nets. However, access to the fishery as a result of the closure has limited set net catch to a negligible level. As such, the recreational take is likely to have been significantly reduced.

67. National Panel Survey information shows recent recreational take of MOK 3 is likely to be approximately 12 tonnes per year. This is comprised of approximately 10 tonnes taken by spear fishing and approximately 2 tonnes taken by rod and reel.

68. Based on submissions and the available information, the recreational allowance proposed in the IPP was revised. In this final advice, MPI proposes that the recreational allowance is set at 20 tonnes for both options. This takes into account current catch levels and allows for moderate growth in the recreational fishery.

69. An allowance of 20 tonnes will accommodate expansion in the recreational fishery in the short to medium term. If, in the future, new information becomes available that suggests the recreational take of MOK 3 has increased beyond the 20 tonne allowance, the management controls can be reassessed.

70. Blue moki is listed as a taonga species in the Te Waipounamu Fisheries Plan of the Te Waka a Maui me Ona Toka Fisheries Forum.

71. Information on Māori customary harvest levels shows that blue moki take in MOK 3 is negligible. A nominal allowance of 1 tonne is considered appropriate in this situation.

72. Prior to the release of the IPP, the review of MOK 3 was not formally discussed at the Te Waka a Maui me Ona Toka Forum. A discussion did, however, take place with customary representatives of Ngai Tahu who signalled that the review would be considered and further information would be received through the official submission period. No submissions were received.

Analysis of Options

73. There is currently only a TACC in place for MOK 3 with no TAC set or allowances allocated for Māori customary harvest, recreational catch, or other sources of fishing-related mortality.

74. The proposed options for your consideration are shown in table 4 below.

Table 4: Proposed TACs, TACCs and allowances for MOK 3

Option	Allowances				
	TAC (t)	TACC (t)	Customary Māori (t)	Recreational (t)	Other sources of fishing related mortality (t)
Current	-	127	-	-	-
Option 1	161	127	1	20	13
Option 2 (MPI Preferred)	197	160	1	20	16

OPTION 1

75. Option 1 proposes to:

- Set the TAC at 161 tonnes;
- Retain the TACC of 127 tonnes;
- Set the allowance for other sources of fishing related mortality at 13 tonnes (10% of the TACC);
- Set the recreational allowance at 20 tonnes (to account for uncertainty around current catch estimates, possible increase in abundance and recreational interest in the stock); and,
- Set the Māori customary allowance at 1 tonne (reflective of low levels of reported customary take).

76. Option 1 is the more cautious option as it does not provide an increase to the TACC. However, given that current catch levels are above the TACC and showing an increasing trend, associated fisheries management and compliance strategies will be required to constrain future catch at or below the TACC.

OPTION 2 (MPI PREFERRED OPTION)

77. Option 2 proposes to:

- Set the TAC at 197 tonnes;
- Increase the TACC from 127 tonnes to 160 tonnes (an increase of approximately 25%) in line with the current commercial catch level;
- Set the allowance for other sources of fishing related mortality at 16 tonnes (10% of the TACC);
- Set the recreational allowance at 20 tonnes (to account for uncertainty around current catch estimates, possible increase in abundance and recreational interest in the stock); and,

- Set the Māori customary allowance at 1 tonne (reflective of low levels of reported customary take).

78. Under Option 2, a moderate TACC increase from 127 tonnes to 160 tonnes can provide potential to obtain higher benefits from the stock in the medium term.

79. Option 2 may encourage further development of a target MOK 3 fishery, however, MPI has no information to suggest that this is a high probability or risk.

80. Under Option 2, the TACC increase will generate an additional 33 tonnes of ACE. Based on the 2012/13 port price of $1.03 per kilogram, an additional commercial catch of 33 tonnes is estimated to be worth $33,990 per annum, and recent deemed value payments would be eliminated or reduced.

OTHER MANAGEMENT MEASURES

81. Retaining the current TACC under Option 1 will require further action and engagement with Industry to address the current over catch and constrain future catch levels to within the TACC. Consideration will need to be given to the development of compliance and fisheries management strategies to achieve this. Options available include a review of the deemed value rates and the review of TACCs for associated target fisheries.

82. MPI recommends that the increase to the TACC proposed under Option 2 is linked to the implementation of an appropriate fishery and stock monitoring programme. MPI is open to working with industry to develop an appropriate programme with a view to improving the information available to guide management.

Assessment against Statutory Obligations

PURPOSE OF THE ACT

83. The purpose of the Fisheries Act (section 8) is to provide for the utilisation of fisheries resources while ensuring sustainability. Ensuring sustainability means maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations; and avoiding, remedying, or mitigating any adverse effects of fishing on the aquatic environment. Utilisation means conserving, using, enhancing, and developing fisheries resources to enable people to provide for their social, economic, and cultural well-being.

84. MPI considers that all options presented in this paper satisfy the purpose of the Act in that they provide for utilisation of the MOK 3 fishery while ensuring sustainability. Available information suggests neither management option proposed is likely to affect the long term sustainability of the stock. Option 1 is more cautious, but is likely to limit utilisation opportunities. In contrast, increasing the TACC from 127 tonnes to 160 tonnes under Option 2, will allow for increased value to be obtained from existing utilisation levels through the reduction in deemed value payments.

GENERAL OBLIGATIONS

85. In setting or varying sustainability measures, you must also act in a manner consistent with New Zealand's international obligations to fishing and the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.

86. A wide range of international obligations relate to fishing including: use and sustainability of fish stocks; and, maintaining biodiversity (s 5(a)). MPI considers that the management options for MOK 3 are consistent with these international obligations.

87. MPI also considers the proposed management options to be consistent with the provisions of the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992 (s 5 (b)). Ongoing work is being done within the area covered by MOK 3 to promote policies that help to recognise customary use and management practices including, but not limited to, maintaining iwi forums and developing Iwi Fisheries Plans.

88. MPI has an obligation to provide for input and participation of tangata whenua and have particular regard to kaitiakitanga (under s 12). MPI sought input from, and provided an opportunity for participation from iwi. MPI did not receive any input on kaitiakitanga and customary interest in MOK 3 during this time, although MPI acknowledges timeframes for input were short. MPI is looking at ways to provide for more effective input and participation by tangata whenua in the future.

TAC

89. Section 13(2A) requires you must set a TAC that is "not inconsistent" with the objective of maintaining the stock at or above, or moving the stock to a level at or above B_{MSY}, in a way and rate considered appropriate for the stock. In doing so, you must have regard to the interdependence of stocks, the biological characteristics of the stock, and any environmental conditions affecting the stock, and set a TAC using the best available information. You must not use the absence of, or uncertainty in, the best available information as a reason for postponing or failing to take action necessary to achieve the purpose of the Act.

90. In considering the way in which, and rate at which, a stock is moved towards or above B_{MSY}, you must have regard to such social, cultural, and economic factors that you consider relevant. There is no statutory guidance on what an appropriate 'way and rate' might be in any given case – it is a matter for you to determine having regard to social, cultural and economic factors. Relevant social, economic and cultural information is set out in the paper.

91. The TAC options presented in this final advice paper take into account the requirements of section 13, and offer differing approaches to managing the fishery that reflect the uncertainty in available information (see "Section 10-Information principles" below).

ENVIRONMENTAL PRINCIPLES

92. Section 9 of the Act requires that:

> All persons exercising or performing functions, duties, or powers under this Act, in relation to the utilisation of fisheries resources or ensuring sustainability, shall take into account the following environmental principles:
>
> (a) associated or dependent species should be maintained above a level that ensures their long-term viability;
>
> (b) biological diversity of the aquatic environment should be maintained; and,
>
> (c) habitat of particular significance for fisheries management should be protected.

93. As blue moki in MOK 3 is predominantly a bycatch fishery, MPI does not have any information on key environmental issues associated specifically with the MOK 3 stock. The proposed setting of a TAC for MOK 3 reflects existing catch levels. There is no information to indicate there will be impacts upon the matters noted in section 9 of the Act.

94. MPI considers that all options presented in this paper satisfy your obligations under section 9 of the Act.

SECTION 10 - INFORMATION PRINCIPLES

95. Section 10 says you must take into account the following information principles when exercising or performing functions, duties or powers under the Act in relation to the utilisation of fisheries resources or ensuring sustainability:

- decisions should be based on the best available information;
- decision makers should take into account any uncertainty in the available information;
- decision makers should be cautious when information is uncertain, unreliable, or inadequate; and,
- the absence of, or any uncertainty in, any information should not be used as a reason for postponing or failing to take any measure to achieve the purpose of the Act.

SECTION 11 - CONSIDERATIONS

96. In making your decision on sustainability measures for MOK 3 you must also satisfy the requirements of section 11 of the Act.

97. Section 11(1) (a) requires you to take into account the effects of fishing on the stock and aquatic environment. MOK 3 is caught by set net and trawl, methods which do have effects on stocks and the aquatic environment. These effects have been taken into account in current management measures. The effects are unlikely to change under either of the proposed options on account of MOK 3 being predominantly a bycatch fishery, and fishing operations not being expected to change because of the setting of a TAC or an increase in the TACC.

98. Section 11(1) (b) requires that you take into account any existing controls that apply to the stock or area concerned. For MOK 3, the current TACC of 127 tonnes is the key control under consideration for change. The levels for the allowances proposed are set at, or moderately above, the current catch levels based on the best available information. The existing area closure and fishing gear controls in place were discussed above and changes are not proposed.

99. Section 11(1) (c) requires you to take into account the natural variability of the stock before setting or varying any sustainability measure. There is no information available on the natural variability of MOK 3 to influence your choice of option.

100. Section 11(2)(a and b) require you to have regard to any regional policy statement, regional plan, or proposed regional plan under the Resource Management Act 1991, and any management strategy or management plan under the Conservation Act 1987 that applies to the coastal marine area and which you consider relevant, before setting or varying any sustainability measure. MPI considers that both options proposed are consistent with the Hector's Dolphin Threat Management Plan. MPI is not aware of any other policy statements, plans or strategies that should be taken into account for MOK3.

101. Section 11(2)(c): Before setting or varying any sustainability measure for any stock, you must have regard to any provisions of s 7 and s 8 of the Hauraki Gulf Marine Park Act 2000 that apply to the coastal marine area and that you consider relevant. The boundaries of the quota management area for this stock do not intersect with the Park boundaries.

102. Section 11(2) (d) requires you to have regard to any planning document lodged by a customary marine title group under section 91 of the Marine and Coastal Area (Takutai Moana) Act 2011. No planning documents applicable to MOK 3 have been lodged.

103. Section 11(2A)(b) requires you to take into account any relevant fisheries plan approved under section 11A before setting or varying any sustainability measure. There is one relevant plan that has been approved under section 11(2A)(b) that you need to take into account, as discussed below.

104. Te Waka a Maui me ona Toka Iwi Forum has produced the Te Waipounamu Iwi Forum Fisheries Plan. This plan covers MOK 3 and identifies blue moki as a taonga species. Te Waipounamu Iwi Forum Fisheries Plan contains six management objectives, two of which are relevant to the management of MOK 3

- Management objective 3: to develop environmentally responsible, productive, sustainable and culturally appropriate commercial fisheries that create long-term commercial benefits and economic development opportunities for South Island iwi;

- Management objective 5: to restore, maintain and enhance the mauri and wairua of fisheries throughout the South Island.

105. MPI considers that the management options presented in this advice paper will contribute towards the achievement of these two management objectives. Both options are expected to ensure that the fishery remains sustainable and that environmental impacts are managed. Option 2 would also increase the benefits from the MOK 3 commercial fishery.

106. Section 11(2A)(a and c) require you to take into account any relevant conservation services or fisheries services or decisions not to require such services. MPI does not consider that existing or proposed services materially affect the proposals for this stock. No decision has been made to not require a service in this fishery at this time.

TACC AND ALLOWANCES

107. When setting any TACC, section 21 of the Act requires you to allow for Māori customary non-commercial interests, recreational fishing interests, and for any other sources of fishing-related mortality, when setting or varying the TAC. The Act does not provide an explicit statutory mechanism to apportion available catch between sector groups, either in terms of a quantitative measure or prioritisation of allocation. Accordingly, you have the discretion to make allowances for various sectors based on the best available information.

108. Option 2 proposes an increase to the TACC from 127 to 160 tonnes, which more closely reflects the current commercial catch levels. By increasing the TACC, fishers are more likely to be able to cover MOK 3 catch with ACE and, therefore, will be less likely to incur deemed value payments.

109. MPI considers the proposed recreational allowances are appropriate based on the available information. No submissions identified any new information that would support a change to the proposed recreational allowance.

110. MPI considers the proposed Māori customary allowance is appropriate based on the available information. No submissions identified any new information that would support a change to the proposed Māori customary allowance.

111. Information on discards for MOK 3 is uncertain, however, it is likely that levels of other sources of fishing-related mortality in this fishery should be allowed for. Both Option 1 and Option 2 support setting an allowance that aligns with that set for similar fisheries.

Conclusions

112. Since introduction into the QMS, commercial landings of MOK 3 have fluctuated, however, the TACC has been exceeded over the last four years. This has triggered the review of the management of the MOK 3 fishery.

113. Option 1 proposes setting a TAC, retaining the current TACC, setting a recreational allowance that provides for a moderate increase in utilisation, and setting an allowance for Māori customary fishing at 1 tonne.

114. Option 2 proposes to enable improved utilisation of the MOK 3 stock by setting a TAC, increasing the TACC to reflect current catch levels, setting a recreational allowance that provides for a moderate increase in utilisation, and setting an allowance for Māori customary fishing at 1 tonne.

115. Both options include an allowance for other sources of fishing-related mortality of 10% of the TACC. This allowance is consistent with that set for similar fisheries.

116. Option 1 is a more cautious approach. However, given Option 2 allows an increase that reflects what is currently being caught, the changes are a reflection of current practice rather than encouraging further increases in MOK 3 catch. There is no information to suggest that the proposal to increase the TACC would undermine the sustainability of the stock or the interests of customary and/or recreational fishers.

117. Option 2 is the MPI preferred option as it allows greater benefits from current commercial catch levels and will prevent MOK 3 becoming a limiting bycatch species in other economically important FMA 3 fisheries.

118. MPI also recommends that the increase to the TACC under Option 2 should be linked to the implementation of an appropriate fishery and stock monitoring programme for MOK 3 and MOK 1. MPI, in consultation with Industry, will develop an appropriate programme to act as an indicator of the health of the stock and allow MPI to monitor any sustainability concerns that may arise within the fishery.

Recommendations

119. MPI recommends that, for the MOK 3 fishery, you choose either:

OPTION 1

Agree to set a TAC that accounts for setting the TACC and allowances for MOK 3 as follows:

i) **Set** the TAC at 161 tonnes,

ii) **Set** the Māori customary fishing allowance at 1 tonne,

iii) **Set** the recreational fishing allowance at 20 tonnes

iv) **Set** the other sources of fishing-related mortality allowance at 13 tonnes,

v) **Retain** the existing TACC of 127 tonnes. **Agreed/ Not Agreed**

OR

OPTION 2

(MPI preferred)

Agree set a TAC that accounts for setting the TACC and allowances for MOK 3 as follows:

i) **Set** the TAC at 197 tonnes,

ii) **Set** the Māori customary fishing allowance at 1 tonne,

iii) **Set** the recreational fishing allowance at 20 tonnes,

iv) **Set** the other sources of fishing-related mortality allowance at 16 tonnes,

v) **Increase** the TACC to 160 tonnes. **Agreed/ Not Agreed**

Scott Gallacher
Deputy Director-General
Regulation and Assurance
for Director-General

Hon Nathan Guy
Minister for Primary Industries

/ / 2014

Appendix 1: Submissions

- Ross Divett
- Bill Hartley
- Fisheries Inshore New Zealand (FINZ)
- The Kaikoura Boating Club Incorporated (KBCI)
- New Zealand Sports Fishing Council (NZSFC)
- Southern Inshore Fisheries Management Company Limited (SIFMC)

Ross Divett

13 B Devon Street

Sydenham

Christchurch

27th May 2014

A Submission on

A Review of Sustainability and other management controls for blue moki 3 FMA mok3)

MPI discussion paper No:2014/23

Introduction:

The Discussion paper deals with FMA MOK3. This area extends from the East side of the South Island near Cape Campbell , the Kaikoura peninsular, Pegasus bay, Bamks Peninsular, Timaru Oamaru Moeraki, Dunedin , Pounawea,Nugget point, and areas south.

It is a vast area with many different fish management practices needed for individual habitat areas within MOK3 to protect the sustainability of Blue Moki. It is imperative that MPI uses small area management and the tools that technology provides to do this , to manage moki 3. It is not good enough to say that the fish biomass is sustainable because in one area of Moki 3 commercial fishers are catching ACE.

Having said that the migration of Blue Moki requires a larger view to take in the area of (MOK 1) to better understand the spawning and reproduction of Blue Moki.

Context

The need to act

Note 6 The available information on MOK 3 is insufficient to enable reliable estimates of BMSY

Without enough information I would favour the statis quo until science can provide the information. This applies not only to commercial but recreational as well. The real estimate of recreational take is very low since the removal of the species from the majority of fishers with the removal of a means for catching the fish . Namely the set net ban on the east coast.

I support the initiative in improving the knowledge of the fishery before any changes. I would also like to see some work done on improved ways of treating the landed fish to

improve the quality of the fish and increase its value. At the moment the fish is not able to be frozen and sold as the flesh goes to mush.

Note 12 MPI is looking to enhance catch information through [illegible] to support management monitoring as well as to promote discussion about options for cost effective research strategies in conjunction with the larger MOK 1 stock

I am not happy with increasing the ACE as a way of increasing the number of fish returned to the port after catching. To do this is rewarding the fisherman for underhanded practices. IE dumping.

It is clear deemed values do not work in this situation.

Options would be:

1. to increase the penalties for dumping.
2. Improve the targeting of the fish that a fisherman has ace for eg different type of net, better use of side scanning and sonar
3. Improve the value of the fish landed.

I believe the increase in abundance is a result of a lack of recreational take as they are excluded from the fishery by a lack of means to catch the fish.

It is a fish with greater value to recreational fishers because it is caught in small numbers and largely eaten fresh. Also the value to recreational fishers from a health and well being point of view is immense . The benefit of localised small area set netting to the general population is underestimated and should not be overlooked.

As a group 6 stock moki3 utilisation has been reduced to nil for recreational fishers . Limited open areas for net fishing on the east coast with close monitoring would increase utilisation and if managed appropriately allow more biological knowledge of the stock to be recorded. The fishers involved would apply for a permit to fish provide they supplied information about catch.

A lack of Minimisation of adverse effects of the commercial by catch of Blue Moki is a travesty of fish management. The bycatch and underreporting needs to be resolved by any means.

Reference to the position Paper Recreational :

Note 32 The number of moki caught on rod and reel is virtually zero. The only method of catching moki aat the moment is by spear fishing which for success requires high abundance. You now have to be fit and able to dive to catch moki recreationally.

Note 33 totally correct

Note 34 correct

Note 35 You cannot make any inference at all . the accuracy is just not available.

Note 36 recreational can't catch them because the method has been removed.

Note 37 See comments to note 36 and again somebody is trying to make assumptions for the sake of making assumptions.

Note 38 Please read this submission.

Initial Consultation

Note 70: if any discussion took place it had nothing to do with FMA3and FMA5 forum. I do not support a reduction in MLS.

The overriding issue for the recreational group was the limited ability to access the fishery due to the recreational set net ban.

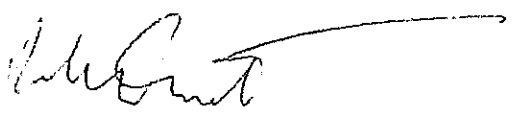
Proposed response:

It is not right to set a tac tacc or any other allowances when so little is known about the stock.

I propose to maintain the statis QUO with option 1 but start to increase the knowledge with the installation of the sampling study "Catch-at-age of the commercial landings of blue moki in MOK 1 and MOK 3". This will at least provide information for the next review. Also allow limited area set netting that is closely monitored and contributes to a better understanding of the fishery.

I would also propose, in the absence of any other effective alternatives, harsher penalties for knowingly breaching regulations in particular dumping.

I further propose a study of Limited open areas for net fishing on the east coast with close monitoring . THis would increase utilisation and if managed appropriately allow more biological knowledge of the stock to be recorded. The fishers involved would apply for a permit to fish provide they supplied information about catch. Limited open areas for net fishing on the east coast with close monitoring would increase utilisation and if managed appropriately allow more biological knowledge of the stock to be recorded. The fishers involved would apply for a permit to fish provide they supplied information about catch.



Ross Divett BSc. , BDS

13-6-14

Bill Hartley
5A Churchill St.
Kaikoura 7300.

Dear Sir/Madam,

Thank you for the opportunity to make a submission on the review of MOK 3.

We request you adopt option one.

As a rec. fisher who used to set net, & hasn't caught a blue moki since the set net ban came into force, (& have many friends in the same situation), think that the 5T rec. allowance is sufficent, & TACC of 127T is the best option.

Thanking you,

Your's,

W. (Bill) Hartley.

26 June 2014

Fisheries Management
Ministry for Primary Industries
PO Box 2526
Wellington 6140
Email: FMsubmissions@mpi.govt.nz

REVIEW OF MANAGEMENT CONTROLS FOR BLUE MOKI 3 (MOK3)

Introduction

1. This submission is from Fisheries Inshore New Zealand (FINZ) and is made in response to MPI's Discussion Paper No. 2014/24. FINZ appreciates the granting of a short extension to allow further consultation with its members.
2. FINZ seeks to advance the interests of quota owners and fishers in inshore finfish, pelagic and tuna fisheries. FINZ is a nation-wide organisation and has over 135 members representing their interests in 239 fish stocks. Our vision is "A healthy sustainable fishery that is internationally-competitive, profitable and recognised as the preferred source for consumers of wild caught fish worldwide".
3. Our mission is to provide dynamic and transparent leadership, inform decision-making and actively engage with our members, officials and other stakeholders as we advocate for the increased recognition of the value of New Zealand's inshore fisheries.

General

4. FINZ acknowledges that with many inshore fishstocks there is incomplete information upon which to base management changes. Without significantly greater public funding of fisheries research, MPI will need to be pragmatic about changes to management settings.
5. FINZ welcomes MPI's decision to consider changes to MOK3 as a pragmatic and sensible approach to managing this stock. FINZ considers more such changes should be contemplated and we look forward to working with MPI to ensure the management of inshore finfish is both more timely and responsive.
6. In conjunction with SIFMC, FINZ would also welcome the opportunity to discuss with MPI the content and funding of future research to support management of both MOK1 and MOK3. More detail regarding potential research is provided in SIFMC's submission.

MOK3 TAC Change

7. Southern Inshore Fisheries Management Company Ltd (SIFMC) is the Commercial Stakeholder Organisation that represents the interests of those that fish commercially for MOK3. FINZ has read the submission from SIFMC and wholly supports the view put forward by SIFMC.
8. FINZ supports Option 2 in the consultation paper to increase the TAC for MOK3 to 187 tonnes and the TACC to 160 tonnes.
9. As set out in the submission from SIFMC, there have been significant changes in this fishery due to the introduction of measures to reduce the risk to Hector's dolphin. FINZ submits that these spatial closures have contributed to the increase in the abundance of MOK3 which has resulted in increased catches in recent years.

To discuss any aspect of this submission, please contact:

Jeremy Helson
Chief Executive
Fisheries Inshore New Zealand

P: 021 2728 727
E: Jeremy@inshore.co.nz

Submission to MPI on MOK3 catch

By the Kaikoura Boating Club Inc.

The Kaikoura Boating Club has about 400 member families (397 as at 1 Nov 2013). Membership rights include all family members living at the same address and any guests accompanying those members, and thus represent some 2,000 individuals on the water in any year.

The club maintains 3 ramps, one each on the north and south side of the peninsula and one near Oaro at Boat Harbour. The objects of the Club are to provide members with facilities for boating and to lobby for the preservation and enhancement of recreational fishing opportunities for members.

The graph in figure 2 of the MPI Review of controls for MOK3 shows a rise of commercial catch in 2006 and 2007. This rise is consistent with changes in fisher behaviour trying to catch the increased TAR3 TACC under the 2005 Adaptive Management Program (AMP). About 20% of MOK3 is recorded as by-catch to targeting TAR in the set-net fishery.

There is a significant drop in commercial MOK3 catch in 2008-09 consistent with reduced set netting due to the introduction of the Set Net Ban. MOK3 catch then increase as commercial fishers adapt to the new situation and attempt to catch the available TAR3 ACE (which they cannot do).

The introduction of that ban had a substantial effect on recreational fishers, as very few recreational fishers set net more than 4 miles off shore. The paper refers to the 1999-2000 diary survey giving estimates of between 36 and 70T of recreational catch. This was an important recreational fishery.

The 2011-12 NZ Marine Recreational Marine Fishing Survey was (as acknowledged) not structured in a way that would provide any useful information on MOK3 catch. It is acknowledged that the fishery is currently substantially lower than the peak of some 70T, yet anecdotal evidence is that it is still a substantial recreational fishery in the South Island, and is definitely a substantial recreational fishery in the northern part of its migration.

It is our contention that it is just a matter of time for recreational fishers to adjust, and develop new technologies, until their catch returns to figures more like the 70T historically acknowledged. Recreational behaviour is slower to change than commercial behaviour, particularly as recreational fishers do not enjoy the exemption to the 4 mile set net exclusion zone enjoyed by the commercial sector south of Kaikoura.

The Kaikoura Boating Club strongly objects to a recreational allowance of only 5T in option 1. The best credible evidence is that recreational take was at least 10 times the amount being allowed, and there is every likelihood of catch returning to those levels in the near future.

It seems highly likely to us that the increased commercial catch results from a combination of factors including:

Increased commercial effort due to the increased TAR3 TACC under the AMP; and

Temporarily decreased recreational take due to the set net ban.

It seems to us that the most sensible course of action is to acknowledge that the AMP is not working, and reduce the TAR3 TACC to previous levels, thus reducing the set net effort for TAR, and the major bycatch of MOK3.

It seems that the only real effect of the TAR3 AMP has been a substantial increase in MOK3 catch.

Given that this blue moki stock is right now an important recreational fishery in the northern part of its migration, removing the TAR3 AMP seems a far more realistic option in allowing for people to meet their reasonable social, economic and cultural needs.

Kaikoura Boating Club rejects both option 1 and option 2 – and all the logic underlying them.

Mark Connor
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secretary@nzsportfishing.org.nz

LEGASEA
FISH FOR THE PEOPLE

NEW ZEALAND
SPORT FISHING

Inshore Fisheries Management
Ministry for Primary Industries
PO Box 2526
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25 June 2014

NZ Sport Fishing Council – LEGASEA submission on the review of sustainability and other management controls for blue moki 3 (MOK3)

Recommendations

- That no change to blue moki 3 catch limits be made at this time due to the absence of basic fishing mortality data.
- Prior to any catch limit increase the Ministry for Primary Industries must urgently undertake at-sea catch research to establish a more reliable estimate of blue moki 3 mortality and catch at age.

NZ Sport Fishing Council - LEGASEA

1. The New Zealand Sport Fishing Council and our outreach LegaSea (the submitters) appreciate the opportunity to submit on the review of sustainability and other management controls for blue moki 3 (MOK3). The Ministry for Primary Industries (MPI) released their Discussion Paper on 26 May with submissions due by 25 June 2014.

2. The submitters object to the Ministry's tight consultation timetable, giving only 21 working days to respond to the proposals for this blue moki 3 fishery that is important both socially and culturally. It is unreasonable to expect non-commercial interests to respond with adequate information to inform the Minister's decision in the time allowed, as required by ss 12 and 13 of the Fisheries Act.

3. NZSFC representatives are available to discuss this submission in more detail if required. We look forward to positive outcomes from this review and would like to be kept informed of future developments. Our contact is Roz Nelson, secretary@nzsportfishing.org.nz.

4. The NZ Sport Fishing Council is a national sports organisation with over 32,000 affiliated members from 55 clubs nationwide.

5. The New Zealand Sport Fishing Council has initiated LegaSea to generate widespread support for the ongoing effort to protect and enhance the public's access to abundant fisheries in a healthy marine environment. Also, to broaden NZSFC involvement in marine management advocacy, research, education and working together on behalf of our members and LegaSea supporters. www.legasea.co.nz

6. We are committed to ensuring that sustainability measures and environmental management controls are designed and implemented to achieve the Purpose and Principles of the Fisheries Act 1996, including "maintaining the potential of fisheries resources to meet the reasonably foreseeable needs of future generations..." [s8(2)(a) Fisheries Act 1996]

Executive summary

1. The increased catches of blue moki in MOK3 are the result primarily of the increase in reported targeting of spiny dogfish 3 (SPD3), increased availability of tarakihi (TAR) Annual Catch Entitlement (ACE) and the inevitable bycatch of MOK3.

2. It is irrational to respond to increased MOK3 catches without sufficient ACE to balance when this increasing catch results from fishers entering the fishery and using a stock such as spiny dogfish as a stated target species. Spiny dogfish 3 is a stock that is only 27% caught, catches have been steadily declining for a decade (80% caught in 2005) and SPD3 has inevitable bycatch of blue moki.

3. A rational response is to review all the mixed species and balance the Total Allowable Commercial Catches (TACCs) so that the most vulnerable of them to overfishing can be defended. MOK3 has a legal right to have catches restricted to ensure sustainability and the Minister, through the Ministry for Primary Industries (MPI), has a legal duty to act in such a manner.

4. The first attempt at this work must be to gather at-sea catch data. Discards are the Achilles heel of any management system relying on reported catch to assess stocks. The extent of sub-legal catch and discards of legal sized fish must be gathered before an elementary understanding of fishing mortality can be established. The initial fishing response to a lack of ACE for one species in a mixed species fishery is to discard at sea and avoid the deemed value consequences of a reported landing.

5. Perhaps there ought to be a moratorium on fishers entering the fishery on the spurious claim of targeting spiny dogfish (SPD), rig (SPO), or tarakihi (TAR) when it is common knowledge that insufficient ACE exists to balance the inevitable bycatch of blue moki.

6. The inseparable nature of MOK3 and MOK1 due to annual spawning migrations crossing Fisheries Management Area boundaries means the Ministry's proposal that considers the MOK3 TACC in isolation from the MOK1 ignores the fundamental stock dynamics. The mixed catch of fishers targeting MOK, SPD, SPO, TAR, and Hapuku/Bass (HPB) categorise all as 'associated species' for the purpose of s.9(a) of the Fisheries Act 1996. The effects of each TACC on the other species must be carefully weighed to ensure none are being overfished in the pursuit of others.

7. The NZSFC submits that no change to catch limits be made at this time due to the absence of even basic fishing mortality data. MPI must urgently undertake at-sea catch research to first establish a more reliable estimate of blue moki 3 (MOK3) mortality and catch at age.

Submission on MPI proposals

The need to act

8. The Ministry for Primary Industries (MPI) asserts the need to increase the blue moki 3 Total Allowable Commercial Catch arises from the TACC being over caught by 25%. TACCs being exceeded is now the common trigger for an increase in TACC, not any demonstrable increase in abundance.

9. Conversely, MPI make no attempt to apply the same principles, to adjust the TACC, when TACCs are regularly under-caught. Either the TACC is a fishing control or it is not. MPI's current application suggests TACCs are only adjusted upward, not downwards, when overfishing occurs without explanation.

10. ACE entitles commercial fishers to only take that proportion of the fishery, in that year. No more. All extra is largely beyond their legal rights and should not occur.

11. The sudden increase in the amount of deemed value charges suggest that changed fishing behaviour caused overcatch beyond the 120% threshold and invoked charges above the port price. This detail should be explicit in the Initial Position Paper (IPP) to inform comment on the basis for a TACC increase.

12. MPI note that increased catch is not necessarily a sign of greater abundance, and leaves the causes of overcatch unexplained. This alone should rule out any serious proposal to increase catch. Blindly increasing TACCs does not follow the intent, the purpose or principles of the Fisheries Act.

13. Clearly, the need to act is not because recreational interests are not being fulfilled. We submit MPI would be better turning their minds to restoring recreational interests, as provided for within the Act.

Management approach

14. MPI assert that MOK3 is managed under the National Finfish Plan, where it resides in Group 6. This group has only very general objectives of sustainable catch and mitigation of the effects of fishing. This is incorrect. MOK3 is managed under the Fisheries Act 1996 and is no different in that regard to any other stock subject to the quota management system (QMS).

15. The stock has been in the QMS for 28 years yet no information has been gathered except for reported landings. The dearth of data on MOK3, despite having 28 years to gather basic catch at-sea data, means the precautionary principle in s.10 must apply. This is not discretionary.

16. Action to meet the Purpose of the Act by setting catch limits to enable sustainable utilisation cannot be construed from the information available. There are no signals that current catch is sustainable, never mind any increases.

17. The deliberate minimising of management costs by not gathering fishery data also results in the necessity to set very conservative catch limits.

18. Although MPI state a desire to link the TACC to gathering better fishing data on MOK3, no suggestions are made and the notion simply lies on the table.

19. The IPP cautions that for low value stocks like MOK3 regular research projects, or even catch sampling, would not be "cost-effective".[12]. This suggests the only purpose in research is for the research results to provide value by way of increased TACCs beyond the research cost – that is untrue. In a management system relying on output limits the Minister, through MPI, has an obligation to gather robust fishing mortality data and if ITQ shareholders want to see ACE generated from their shares then they need to invest in data gathering, otherwise the TACC can, and often should, be set at zero.

20. MPI suggest if there was interest in development options could be explored to *"transition MOK3 to a higher fishery plan group"*, and develop *"suitable stock monitoring tools"*. [63] This is a classic. Now the non-statutory Fisheries Plan becomes the limiting factor, not the tool to support the statutory management functions of the Fisheries Act.

Biological characteristics

21. New Zealand MOK1 and MOK3 are inseparably co-dependent due to the annual migration of the spawning stock beginning in late autumn. Catch in one area will immediately affect the other, even though most of MOK1 is beyond the range of spawning migrations and catch is concentrated. MPI note *"that there is likely to be interdependence between FMAs and increased catches in FMA3 are likely to have an impact on other areas"*. [16] Considering increasing the TACC in MOK3 without assessing the effect on MOK1 threatens to simply move catching opportunity from one set of shareholders to another.

22. Blue moki rapidly grow to the Minimum Legal Size (MLS) of 40cm and then growth slows and they live long. Such species are vulnerable to overfishing.

23. There is no information regarding the discard rate for sub-legal moki caught by trawl or set net - the two methods that could be expected to have significant sub-legal catch. Monitoring landed catch

without the discard rate data is pointless. Such a large MLS will drive high discard rates unless selectivity is excellent, yet there is no data or commentary on this.

Stock status

24. Biomass levels are unknown.

25. MPI assert that because landed catch has been mostly stable over the past 14 years that fishing pressure is low.[18] Landed catch is not fishing mortality and such assumptions are simply invalid.

26. Fishing intensity and stock status are *unknown*.

Commercial fishing

27. Blue moki is taken when targeting blue moki, tarakihi (TAR), rig (SPO), spiny dogfish (SPD) and hapuku-bass (HPB) in Area 3.

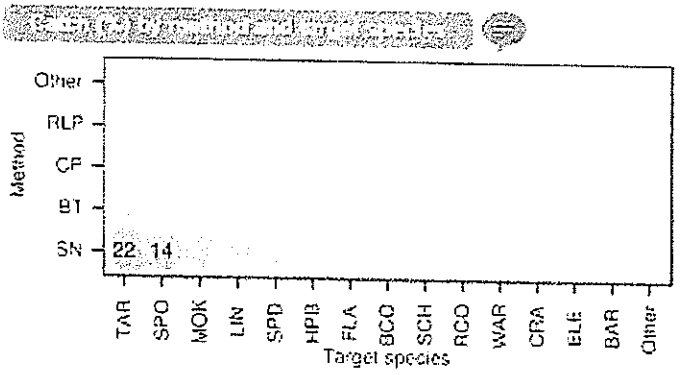

Figure 1: Catch (%) by method and target species.

28. Bycatch levels of blue moki 40cm or greater are low in the trawl fleet, but no data is available on catch due to the failure to undertake at-sea catch sampling.

29. Tarakihi (TAR), rig (SPO) and spiny dogfish (SPD) are the three main species with significant MOK3 bycatch. If TACC increases are granted to generate ACE to enable the catch mix to be balanced then we suggest MPI are on a road to nowhere.

30. TAR3 is 75% caught with 377 tonnes (t) uncaught. SPO3 is 77% caught with 138 t uncaught. SPD is 27% caught with 3492 t uncaught. The potential and inevitability for MOK3 to constrain the catch of rig, spiny dogfish and tarakihi is obvious.

31. MPI suggest *"attempts to constrain blue moki catch to average levels could create further disincentives to report and land catch, making it difficult to identify trends or signals that there are opportunities or concerns arising in the fishery"* [58].

32. If MPI are reluctant to allow MOK3 to constrain the catch of associated species then the blue moki TACC would need to increase one hundred fold to accommodate the TACCs that have never been caught, never been assessed, and never been reviewed since introduction to the QMS in 1986!

33. Talk of disincentives is merely an admission that the QMS fails to import the stewardship promised by the early economic commentators. Other jurisdictions in the English-speaking world have abandoned the fanciful notions of incentive based fishing rules; MPI is encouraged to do likewise, and join the enlightened world.

34. There is no detailed effort data included. Is aggregate effort increasing? Is temporal or spatial effort increasing or varying?

35. A port price of $1.03 is incorrect; and if it was correct having deemed values of 75% of the port price rising to 170% is incoherent. Such mismatches drive dumping.

36. The sudden jump in deemed values paid for overcatch from $4,000 to $40,000 indicate that effort somewhere in the fishery has increased. Trawl catch is declining as a proportion of total catch. Set net targeting spiny dogfish is increasing.

37. Commercial users need to be more selective if they genuinely want to avoid catching blue moki. Providing TACC increases on a whim removes the need for industry to improve selectivity, a common weakness.

38. The data available to MPI for analysis is outdated.

39. The failure to monitor the blue moki 3 fishery raises the obvious question of, what is the species doing in the QMS?

40. How can the Minister be satisfied that MOK3 is being utilised sustainably to comply with s.17(1) of the Act when no data is gathered that would enable such a judgment to be made?

41. We submit that MPI proposing TACC increases while failing during the last 28 years to monitor the blue moki 3 fishery smacks of operational contempt for the QMS and the Fisheries Act that enables it.

42. A set net mesh of 114mm, the legal minimum, will entangle blue moki well below the MLS.

43. Industry reject in [69] a catch sampling programme due to $250,000 cost, yet they will pay $43,000 in deemed values and more in cost recovery levies, and reap the benefits of taking those fish, including keeping crew gainfully employed and businesses going. Implementation of such basic research programmes should not be at the discretion of ITQ shareholders. The Minister, through the Ministry, has an obligation to undertake the gathering of actual catch data for all stocks.

44. Failure to gather catch at-sea data reduces the usefulness of TACs and TACCs, even though these basic tools are the very backbone of the QMS. The failure to get these catch limits set correctly destroys the integrity of the QMS and raises serious questions about the credibility of fisheries management in New Zealand.

45. Clearly the adoption of an increase in the TACC for TAR3 in 2006 under an adaptive management programme has not resulted in increased TAR3 catches. The only significant outcome of the increased effort to catch TAR3 has been an increase in the bycatch of blue moki. Kaikoura commercial set netters warned of significant reductions in the size distribution of TAR3 and advised against the increase in TACC – but their practical concerns were ignored in favour of Treasury-driven demands for higher returns. This is clearly a case where government driven demands for greater returns are having a destructive impact at multiple levels. The adaptive management programme is not being competently managed.

46. Failure to achieve increased catches is clearly an indication of a highly stressed fishery and ought to result in a significant reduction in the TACC (below original levels). That this has not happened demonstrates that the drivers are not the biological health of the ecosystem or fish stock, but short-term financial rewards.

Set netting

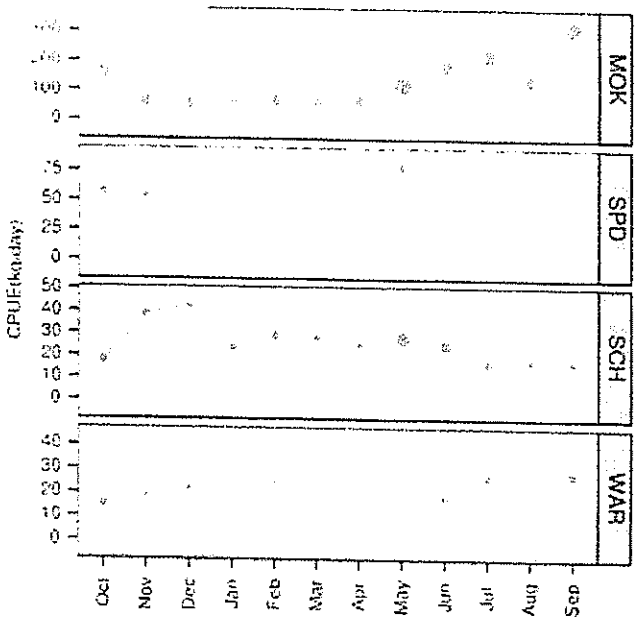

Figure 2: Catch rate (kg per day) by species and month.

47. MOK has a season spanning six months, with peak catches coinciding with the spawning aggregations annual migration to MOK1.

48. The September peak is indicative of last minute efforts to catch all available ACE. (Figure 2). Moki is clearly able to be targeted with set nets, and is a bycatch in almost all other fishing events.

49. The CPUE legend of Kg/day is incoherent. A day is not a unit of effort - it's a unit of time. Without including net length details a time period of one day remains pointless.

50. There is nothing to suggest that the increase in MOK3 catch is due to anything other than increased fishing effort. The low TACC completion rate of spiny dogfish, rig and tarakihi is enabling fishing effort to continue, even though the inevitable blue moki catch cannot be balanced with ACE, reflecting a mismatch in mixed species TACCs.

51. There has been a recent increase in targeting spiny dogfish in October and November that has an inevitable bycatch of MOK3 for which ACE is not available, and the higher deemed value rate drives up aggregate deemed value payments for the year.

52. Rather than continue to provide TACC increases to enable whatever catch is occurring the Minister, through MPI, is duty-bound to first ensure sustainability.

53. It is usual for the species most vulnerable to overfishing within a mixed species fishery to have a TACC that leaves other species relatively more abundant. MOK3 appears to serve this role.

54. Determining target and bycatch species is a vexed matter. The actual target for the fisher is usually more than a single species, especially when using set nets over broken bottom features. Experience tells us that there is often a wide gulf between the species stated on the catch effort landing returns (CELR) and anticipated catch.

55. MPI would be better directed to assess at what reduced level of TACC for spiny dogfish, rig and tarakihi would limit catches of MOK3 to within the TACC. Otherwise the Minister begins a journey

without end or without statutory authority – granting increases in TACC to balance catch when there is no information as to the effects of any increase.

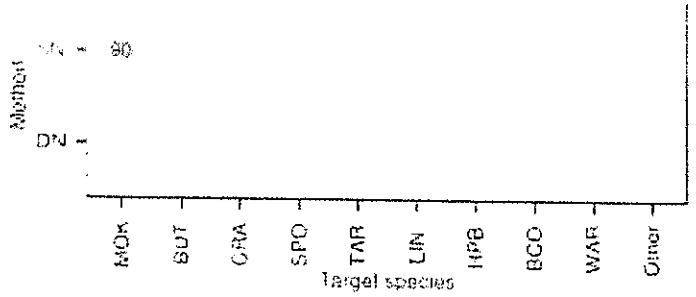

Figure 3: Days (%) by method and target species.

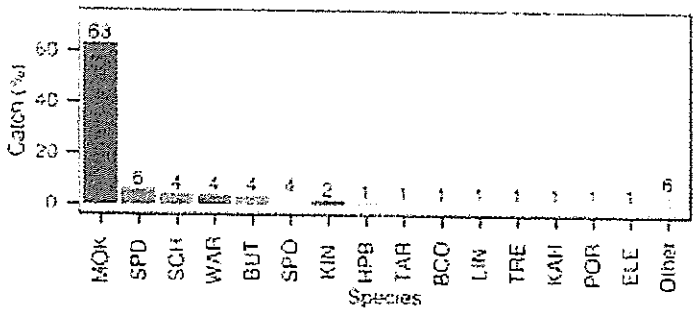

Figure 4: Catch (%) by species.

56. The percentage of moki in the set net catch when targeting other species off Kaikoura is quite small: 6% for sharks; 5% for Tarakihi; 4% for Hapuku/Bass. Sixty three percent of landed catch is blue moki when moki is one of the target species that day in the Kaikoura setnet fishery. This would suggest a very successful targeting practice. Given the extraordinary success from targeting blue moki with set nets why is the TACC being overcaught by 25%?

57. The industry has a choice as to how it uses ACE, as a target or to cover bycatch, but either way it is a binary choice; ACE can only cover a single landing event and fishers must choose.

    - Generating more ACE to compensate for poor fishing practice is rejected as a logical or durable response.

58. The increase in effort, ostensibly targeting spiny dogfish, but landing substantial quantities of blue moki, combine to dismiss any notion that increased catch of blue moki arises from anything other than increased fishing pressure.

    - This increased fishing pressure will be permanently enabled by making a low quality decision to increase the TACC.

Trawling

59. Blue moki is a bycatch in the inshore trawl fleet and accounts for about 15% of total MOK3 catch. Average landings increased from 1990 to 2005 and have declined since, with a sharp drop in the last year.

60. Increased landings more commonly respond to price signals or changes in relative abundance with associated species, rather than abundance of a single species. A far more detailed analysis of the market for blue moki and its changing character are necessary before understanding changes in trawl landings.

61. There appears to be no data on blue moki discards from trawling. The 40cm MLS combined with trawl selectivity biased toward small fish, would indicate a certainty that blue moki between 25cm and 40cm are routinely caught and discarded. The absence of this trawl data combined with the susceptibility of blue moki to overfishing rapidly increases the risk of any TACC increase in response to increased catch.

Recreational catch

62. Recreational catch estimates span the range from a few hundred kilos to 70 tonne. None of the estimates and the conditions attached serve as a robust guide for setting the recreational allowance.

63. The allowance for recreational fishing interests must, at the narrowest level, be a best estimate of what will be caught, and what should be caught to allow for those interests. When information is poor estimates must be weighted higher in the range to be reasonably sure the Total Allowable Catch (TAC) will not be exceeded.

64. The Supreme Court has clearly ruled that qualitative factors form an essential part of what makes up recreational interests, in particular, *"people providing for their wellbeing, particularly their social wellbeing, is an important element of recreational interests*[1]". [54]. Given the daily bag limits, the popularity of blue moki, and the range of recreational harvest estimates, a reasonable allowance for recreational catch and interests in MOK3 would be in the order of 50 tonnes.

65. MPI acknowledge the 2008 set net closure *"is likely to have drastically diminished recreational harvest"*[65]. However, the Minister has a duty to enable us to provide for our social, economic and cultural wellbeing, and 'must' allow for our non-commercial interests.

Other sources of mortality

66. For MOK3 MPI propose a standard allowance of 10% for fishing related mortality.

67. Whether a 10% allowance for fishing related mortality is reasonable or not depends on the discard rate and the survivorship of discarded fish. No data on either parameter is included, making it impossible to set an allowance that is anything more than just as number – it cannot even be categorised a guess.

68. The inability to account for all fishing induced mortality imperils the Total Allowable Catch (TAC). The TAC is the sole tool that 'ensures sustainability', a primary purpose of the Fisheries Act.

69. MPI acknowledge that blue moki has low productivity and is vulnerable because it is easily damaged in fishing gear. [46]. They also acknowledge that there are potentially high levels of unreported mortality and unseen mortality. [47].

70. If the Minister seeks to make a lawful allowance for fishing related mortality not included in reported landings, and if he seeks to avoid imperiling the TAC, then the standard default of 10% of the TACC (used in data rich fisheries such as SNA1) should be doubled to 20% for stocks such as MOK3 that have poor or no information.

Other considerations

71. The Ministry suggests a TACC increase will not translate into increased fishing effort or have any effect on associated species. [49]. Any increase is simply seen as moving existing cateh from a category requiring deemed value charges be levied to the TACC.

72. This suggestion interseets with several QMS operational matters that give concern -

[1] NEW Zealand RECREATIONAL FISHING COUNCIL INC AND ANOR v SANFORD LIMITED AND ORS SC 40/2008 [28 May 2009]

- **Overcatching the TACC gives rise to higher TACCs.** There is never a cast iron case available to set catch limits at exactly the 'correct' levels, but it is spurious to routinely respond to overcatch by suggesting greater abundance and the need for a TACC increase. As a default it should be assumed that if a TACC is limiting catch then it is serving its primary function. The extent of overcatch in MOK3 suggests less targeting is required if ACE is to be available to balance the increasing bycatch. Furthermore, the recent peak in September catches is unexplained.
- **Understanding factors influencing catch.** Before any process to review a TACC is triggered by overcatch a more thorough investigation should be mounted to fully understand the role that abundance, markets, catch methods, environmental impacts, and fish stock parameters, including associated and dependent species, are playing in increasing catches. A template for gathering basic data to inform on TACC levels must surely be the starting point – not just a low quality proposal for TACC increases.
- **Unbalanced ACE holdings.** We have seen in a number of fisheries the effect of unbalanced ACE holdings. Where, for example, a fisher with access to MOK3 ACE can target that fish during the season leaving little or no ACE in the market for other commercial fishers needing to cover genuine bycatch.
- **Deemed value rates no reflection of the market.** Table 1 below demonstrates that fishers carried over 2,814 kgs of MOK3 unused ACE from 2011-12 to 2012-13, even though the TACC was overcaught by 10,000 kgs. This suggests the deemed value rate no longer reflects the market price of blue moki 3.

Fishstock	TACC	Landings 2011-12	ACE carried over (kg)	ACE at end date 2011-12 (kg)	Landings 2012-13
MOK1	402,605	427,010	3,184	405,789	385,109
MOK3	127,206	137,389	2,814	130,020	158,930

Table 1: TACCs, landings and ACE for 2011-12 and 2012-13.

Management options

Table 1: Proposed TACs, TACCs and allowances for MOK 3

Option			Allowances		
	TAC (t)	TACC (t)	Customary Māori (t)	Recreational (t)	Other sources of fishing related mortality (t)
Current	-	127	-	-	-
Option 1	146	127	1	5	13
Option 2	187	160	1	10	16

73. The Ministry's option 1 contains a very small, 6 tonne allowance for non-commercial catch and interests. Commercial waste receives twice the non-commercial allowances despite blue moki being a sought-after and valuable non-commercial recreational and customary species.

74. MPI accept and state the range of recreational harvest estimates and then ignore them in favour of blindly accepting our catch and interests to be trivial. This is not acceptable and we submit that making initial allowances that trivialise the public's interaction and valuation of blue moki reads down the public's position from which it is very difficult to emerge.

75. Once a more reliable estimate reveals public catch of 50 tonnes the same hysteria that inflamed Snapper 1 is inevitable as the public are accused of overfishing and attract draconian responses from MPI.

76. For MOK3, any allowance for recreational interests under 50t risks eroding any stability sought by having MOK3 in the QMS.

77. It is noted that banning set nets within 4 miles of the coast in all of MOK3 largely eliminated the recreational fishery, which may have once been over 50 t. Confiscating this allowance and making it available to TACC shareholders fails to "allow for" our recreational fishing interests pursuant to s.21(1)(a)(ii) of the Fisheries Act 1996.

78. If set netting is unavailable then opportunity must be given to the public to embrace alternative capture methods. The plethora of undercaught TACCs would suggest MPI sees no urgency in removing uncaught allowances.

79. Option 2 contains a doubling of the recreational allowance. What principle or data supports the proposal that a 100% increase in the allowance is included for any reason other than to act as bait? It is an obvious implication that MPI are saying, "if you agree to commercial catches increasing by 33 tonnes then we will give you an extra 5 tonnes".

80. Is there any basis for proposals that set catch limits and allowances to generate a TACC on a whim? Suggestions like this confirm the lack of clear guidance when applying the Fisheries Act, and officials seem to just make it up as they go along to suit any particular circumstance.

81. This MPI blue moki 3 proposal contradicts the Supreme Court opinion that the amount of fish set aside to allow for recreational interests will be the best estimate of catch, having regard to the regulations that apply.

82. MPI classify a TACC increase from 127 to 160t (33t or 26%) as "moderate" [62]. That "moderate" increase is more than what they consider is the recreational interest in the whole of MOK3.

83. Moki is a sustenance species caught using traditional methods. Moki catch used to feed many local families. Since the set net ban these local families can now only watch as commercials fishers return to shore with boat loads of overcatch. The public rightly considers this a rort!

84. There have been several increases in commercial quota in the last few years in response to landings in excess of the TACC. For example, increases in kingfish area 8 (9 t), elephant fish area 5 (31.5 t), ghost shark areas 5 (24 t) and area 8 (13 t), gurnard area 3 (200 t) and area 7 (26 t), john dory area 7 (25 t), porae area 2 (11 t). MPI need to be careful that they are not providing the wrong incentives to commercial fishers, by rewarding them with extra quota as soon as their catch exceeds the TACC. After all, the setting of Total Allowable Catches is the primary tool that sustains our fisheries for future generations of New Zealanders; TACs are not a tool to be used selectively merely to enrich a select few private quota holding interests.

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SUBMISSION ON

Review of Sustainability and Other Management Controls for Blue Moki 3 (MOK3)

1. Thank you for this opportunity to submit on the Ministry for Primary Industry's (MPI) consultation for a review of the TACC for MOK3 TACC on 1 October 2014.

2. Southern Inshore represents 104 fishstocks with an approximate total of 35,500 metric tonnes of quota shares held by shareholders and associated levy payers.

MOK 3 TACC Increase

3. Southern Inshore Fisheries (SIF) agree that the TACC for MOK3 needs to be increased and an increase to 160t is prudent.

4. Blue moki was introduced into the quota management system (QMS) in 1986 and the TACC has not been reviewed over that time and possibly influenced by catches fluctuating between 60-100 tonnes and being classified as a low knowledge stock.

5. Whilst the set net closure for Hector's dolphins in 2008 may have initially influenced a reduction in effort, we believe the closure has assisted with the abundance increase within MOK3 along the east coast South Island. Blue moki is a target for set net but the increasing abundance is becoming a more prevalent bycatch to trawling.

6. For the last 3 years the TACC has been overcaught and therefore significant costs in respect of deemed values have been paid and expected to increase due to the increasing abundance trend evident in the fishery. We thank MPI for not proposing an increase to the deemed value on the basis of an increased TACC. We propose to work closely with MPI to monitor the dynamics of this fishery from a sustainability and economic viewpoint.

7. We acknowledge that MOK3 is included in the Inshore Fisheries Plan within Group 6 and that the review is essentially based on commercial catch landings and classified as a low

knowledge stock. Within the SIF management plan however we classify it as a medium priority stock and a stock that can become a limiting bycatch to other economically important target fisheries. Rather than single stock management we need to be looking more towards the fishery complexes within and between regions.

8. Blue moki in FMA 3 are presumed to have a northerly migration into the MOK 1 area and therefore it is important if possible that both stocks are reviewed together for cost effectiveness and to characterise the interaction of both stocks. We propose to work with the MOK1 representatives and MPI to look to fund an update to the CPUE and characterisation to develop an index of abundance for 2015.

9. The proposal by MPI for a $250,000 sampling programme is cost prohibitive for both MOK1 and MOK3 quota owners even when proposed that it would cover the last 10 years of no sampling.

10. We propose that the CPUE and characterisation work for MOK1 and MOK3 be done for 2015 at an approximate cost of $20,000 direct purchase by SIF and FINZ (agreement dependent). SIF will fund a MOK3 CPUE and characterisation update if FINZ is unable to commit to funding at this late stage.

11. In addition, the outcome of the first 2-3 years of the better information/better value project will help to better inform mortality. As observers are going to be out on the vessels they could be tasked with otolith removal and sampling the catch for MOK.

12. We believe that continued monitoring is paramount and especially for those that receive TACC increases. Industry and MPI need to work together to develop a sampling management plan that is reflective of a number of stocks and not just focused on one to two fishstocks. This would make more effective use of the sampling time, be cost effective and cover more stocks per year. Alternatives to sampling should also be investigated as some fish receivers send fish direct to auction and direct sampling causes a lot of disruption to their timing. There are solutions to expensive sampling programmes.

13. We are looking towards working more closely with MPI to develop a model to review low knowledge stocks and see MOK3 as a very good starting example.

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