



Initial Position Paper on a proposed in-season increase for Red Cod (RCO 3)

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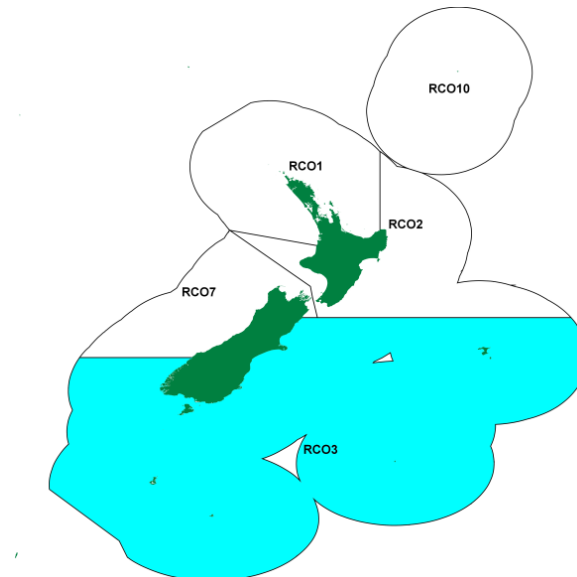
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Introduction

Figure 1: Quota Management Areas (QMAs) for red cod (RCO) stocks. RCO 3 indicated by shading.



1. The Ministry for Primary Industries (MPI) is seeking tangata whenua and stakeholder information and views in regard to red cod in Quota Management Areas (QMA) 3,4,5and 6, all of which combined make up RCO3 (see Figure 1), to inform:
 - options for an in-season increase in the total allowable catch (TAC); and
 - associated options for creating additional annual catch entitlement (ACE).
2. MPI proposes the following options for the total allowable commercial catch (TACC) (Table 1):

Table 1: Proposed TACs, TACCs and S 68 ACE for RCO 3.

Option	TAC (t)	TACC (t)	ACE (S68 in-season) (t)	Allowances		
				Customary Maori (t)	Recreational (t)	Other sources of fishing-related mortality (t)
Option 1 (Status Quo)	4930	4600	0	5	95	230
Option 2 (preferred option)	5291	4600	344	5	95	247

3. MPIs initial preferred option is Option 2 as it provides the best potential to increase economic productivity and enable economic growth within sustainable levels. Option 2 is also the output from the accepted management procedure.

Consultation

4. This Initial Position Paper (IPP) provides the Ministry for Primary Industries' (MPI's) initial views on options for an in-season increase in the total allowable catch (TAC), and associated options for creating additional annual catch entitlement (ACE) for Red cod in area 3 (RCO 3).
5. MPI has developed this IPP for the purpose of consultation as required under the Fisheries Act 1996 (the Act). MPI emphasises the views and recommendations outlined in the paper are preliminary and are provided as a basis for consultation with stakeholders.
6. In April 2013, MPI will compile the Final Advice Paper (FAP) for the attached proposal. This document will summarise MPI's and stakeholder's views on the issues being reviewed, and provide final advice and recommendations to the Minister for Primary Industries. A copy of the FAP and the Minister's letter setting out his final decisions will be posted on the MPI website as soon as these become available. Hard copies will be available on request.
7. MPI welcomes written submissions on the proposals contained in the IPP. All written submissions must be received by MPI no later than 4pm on Tuesday, 22 April 2013.
8. Written submissions should be sent directly to:

Inshore Fisheries Management
Ministry for Primary Industries
P O Box 2526
Wellington 6011

or emailed to FMSubmissions@mpi.govt.nz
9. All submissions are subject to the Official Information Act and can be released, if requested, under the Act. If you have specific reasons for wanting to have your submission withheld, please set out your reasons in the submission. MPI will consider those reasons when making any assessment for the release of submissions if requested under the Official Information Act.

Context

NEED TO ACT

10. Red cod is included on Schedule 2 of the Fisheries Act 1996 (the Act). Schedule 2 applies to stocks that have a high inter-annual variability. For any of these stocks, s13(7) of the Act allows the Minister for Primary Industries¹ (the Minister) to increase the TAC within a fishing year. The Minister may do so only after considering information about stock abundance in the current fishing year and after having regard to the matters specified in subsections 13 (2), (2A) (if applicable) and (3) of the Act.
11. In February/March 2013, MPI fisheries science presented the results of the assessment of abundance for the 2012/13 fishing year to the Southern Inshore Science Working Group (the Working Group). Based on this, the in-season management procedure concludes that a TAC increase of 238 tonnes is possible.
12. The in-season management procedure was developed by Bentley (in prep.) It uses a model that takes the catch per unit effort (CPUE) from the first three months of the fishing year to predict the end of year catch. This model has been reviewed and accepted by the Working Group.
13. The in-season increase will provide for favourable economic and social outcomes from the fishery. However, MPI also notes there is always risk inherent in the accuracy of such a procedure but considers this option to be low risk based on the available information.

MANAGEMENT APPROACH

14. Red cod stocks are managed within the draft National Fisheries Plan (the Finfish Plan) for Inshore Finfish. The Finfish Plan is an MPI policy document which came into operation from July 2011. It sets out management objectives for stocks including RCO 3. Within the Finfish Plan, stocks are grouped based on the characteristics of biological vulnerability and desirability to fishers. The management approach and objectives are tailored accordingly.
15. RCO 3 is a Group 2 stock within the Finfish Plan. Management objectives for Group 2 stocks include:
 - Maximise the overall social, economic and cultural benefits obtained from each stock by enabling annual yield to be maximised.
 - Maintain relative stock abundance at or above an established minimum reference level.
16. The management approach for Group 3 stocks, including RCO 3, is designed to enable responsiveness to changing abundance levels by listing on Schedule 2 to provide for the

¹ The Minister for Primary Industries now exercises the powers and responsibilities of the Minister of Fisheries under the Fisheries Act 1996

opportunity to increase utilisation during periods of higher abundance, enabling greater benefits to be obtained without risking stock sustainability.

17. The management approach for Group 2 ensures there is flexibility to support realisation of these opportunities. This flexibility is balanced by setting baseline catch and size limits that ensure stability and stock sustainability over the longer term.

BIOLOGICAL CHARACTERISTICS OF RCO 3

18. Red cod are a fast-growing, short-lived species. Recruitment is highly variable resulting in large variations in catches between years. The high variability in abundance is thought to be due to this variable recruitment, fast growth, high mortality and few year classes.
19. Red cod enter the fishery at approximately two years of age and few fish older than six years remain in the commercial fishery. This means that pulses of recruitment produce bulges of biomass moving through the fishery.
20. Red cod are highly fecund and recruitment is strongly mediated by environmental conditions, This means that the annual abundance of red cod varies significantly.

Stock Status

21. It is not known whether the current level of the RCO 3 stock is at or above the level that can produce the Maximum Sustainable Yield (MSY) or if the current TACC or any of the options in this paper will maintain the RCO 3 stock at or above a level which can produce the MSY. No recent stock assessments have been carried out on any red cod stocks. Biomass estimates from the recently reinstated winter East Coast South Island Trawl Survey confirm that biomass is low relative to the 1990s.
22. The CPUE index is thought to be reflective of abundance and has been increasing since 2000. As there is no MSY determined for RCO 3, and no accepted stock assessment, it is not possible to manage RCO 3 to MSY. Since we now have an agreed proxy for abundance that is informing the current decision, MPI does not consider that an estimation of MSY for RCO 3 is required before considering an increase to the TAC.

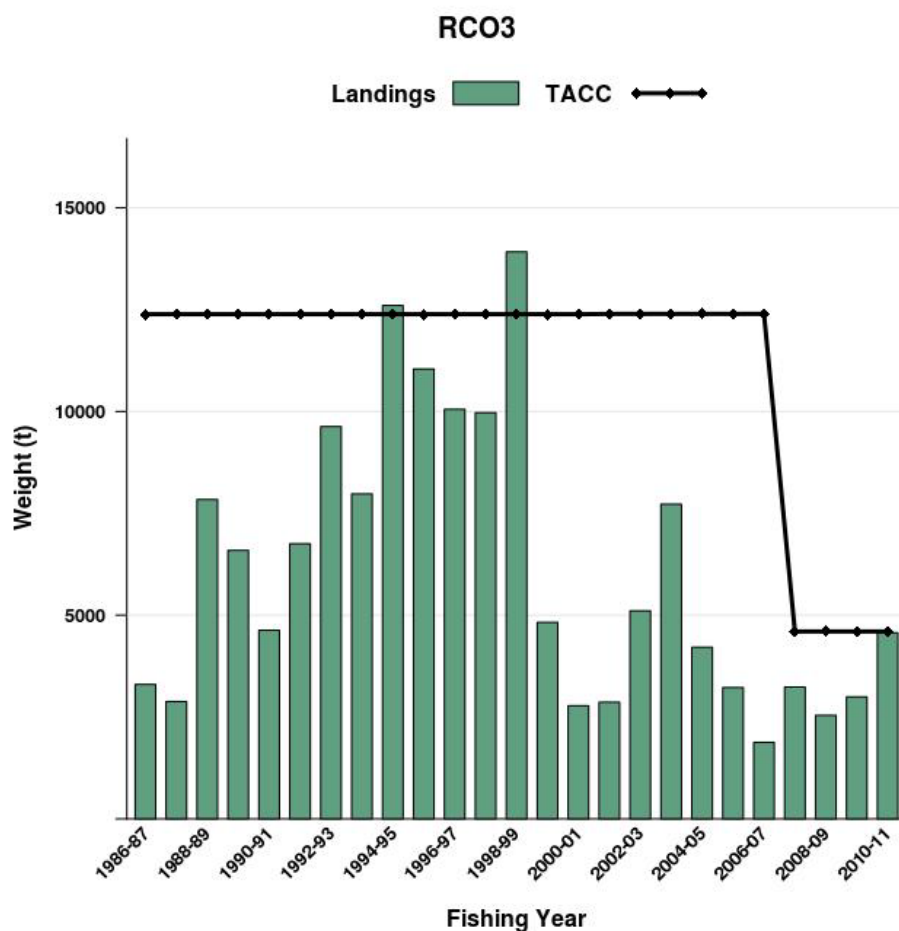
RCO 3 Fishery

23. The red cod fishery is characterised by large variations in catches between years, both within and among seasons. Research indicates that this inter-annual variation in catch is due to varied recruitment causing biomass fluctuations rather than a change in catchability.
24. Trawl surveys and catch sampling of red cod have shown that the fishery is based almost exclusively on two and three year old fish and is highly dependent on recruitment success. From

commercial catch data, recruitment has been negatively correlated with sea surface temperature. Recruitment appears largely controlled by climatic variability that prevails during early life history. Because the fishery is based almost exclusively on 2+ and 3+ year-old fish, a strong or weak year class can have a major impact on abundance in the fishery.

25. Red cod is a key target species within a complex of fished species in the Southern Inshore (trawl) Finfish Fishery. Fishers target their operations around the inter-annual variation in the abundance of the species that make up this fishery complex. RCO 3 is a very large QMA covering FMAs 3,4,5 and 6.
26. Most of the catch in RCO 3 is caught as a target catch to trawling and as a bycatch of other target species baracouta (16%), tarakihi (6%) and flatfish (4%). Around ninety-five percent of targeted RCO 3 landings is taken by bottom trawl, the remaining 5% is taken by Danish seine, midwater trawl and set net. Peak catches in the trawl fishery occur in summer to early autumn for most of RCO 3.
27. The original TACC for RCO 3 was set at a high level, based on 1983 catch levels that were the highest on record at that time. Since 1986, the TACC was increased from 9000 t to 12 396 t by quota appeals. The TACC was intended to allow high levels of commercial catch in years of high abundance. Landings over the seven year period from the 1992-93 fishing year until 1998-99 exceeded 8 000 t annually. Since then landings have averaged around 4 000 t and declined to 1800 t in 2006-07 (Figure 2).
28. Anecdotal information from commercial fishers this year suggests that the abundance of the red cod are not spread throughout the whole of the fishery, with some of the smaller inshore boats not catching large volumes of red cod. However some of the vessels operating in the deeper water in the Canterbury Bight are catching significant volumes at this time of the season.

Figure 1: Historical landings and TACC for RCO 3



Recreational

29. Red cod is a reasonably important recreational fish species. The main method is line fishing from boat or shore.
30. There is a minimum legal size for red cod of 25cm and a maximum daily bag limit of 10 in the RCO 3 area.
31. There is no current recreational catch estimate for RCO 3, but the recreational catches of RCO 3 are understood to be low compared to those of the commercial sector. MPI has commissioned new research on recreational fisheries (a large-scale multi-species study, LSMS) to obtain better information about recreational harvest estimates. This should enable more accurate catch estimates to inform recreational allowance setting in the future.
32. Recreational fishers, especially those in the Akaroa Harbour area, report they are still not seeing the abundant red cod catches that they have seen in previous years.

Māori Customary

33. There is no estimate of the current level of customary non-commercial catch. There are very few customary permits issued for red cod in RCO 3. Harvesting by tangata whenua is, therefore, assumed to be taken under the recreational catch.

OTHER SOURCES OF FISHING-RELATED MORTALITY

34. Processing limits on red cod are sometimes imposed to discourage fishers from landing red cod when the species cannot be processed or when markets are poor. This practice has encouraged dumping. Processing limits are currently less of a problem than in earlier years. Although this can change depending on the market preferences for the finished product.
35. MPI proposes to stay with the estimate of 5% of the proposed TACCs for other sources of fishing-related mortality. This is applied proportionally to the in-season increase option.

Other Key Considerations

36. When making a decision concerning the TAC for a stock, the Minister must have regard to interdependence of stocks, the biological characteristics (discussed above) and any environmental conditions affecting the stock. MPI is unaware of any relevant environmental conditions affecting RCO 3.

Proposed Response

37. MPI is consulting on the following management options for RCO 3 (Table 2):

Table 2: Proposed TACs TACCs and S 68 ACE for RCO 3.

Option	TAC (t)	TACC (t)	ACE		Allowances	
			(S68 in-season) (t)	Customary Maori (t)	Recreational (t)	Other sources of fishing-related mortality (t)
Option 1 (Status Quo)	4930	4600	0	5	95	230
Option 2 (preferred option)	5291	4600	344	5	95	247

38. MPI considers that an in-season increase in the TAC to 5291 tonnes provides the right balance between sustainability and utilisation. The proposed in-season increase is based on the ratio of catch to Catch per Unit Effort (CPUE) for the first three months of the fishing year.

39. In view of the results of the in-season management procedure, MPI considers that both options proposed are consistent with the objective of maintaining the RCO 3 stock at or above the level that can produce the maximum sustainable yield in the short-term.

Option 1 (Status Quo)

40. Option 1 is the status quo and proposes no changes to the TAC.

41. Based on the available information (discussed above), this option presents a very cautious approach to sustainability. As the CPUE analysis shows, RCO 3 abundance is high and there is potential for economic growth that will not be realised under Option 1.

42. Option 1 does not reflect commercial utilisation opportunities. This option could necessitate the additional cost to fishers of covering over-catch of RCO 3 with deemed value payments. In the case of RCO 3 this is a ramped system with the annual deemed value ranging from \$0.50/kg to \$1.00/kg.

Option 2

43. Option 2 proposes:

- The TACC be increased from 4 600 t by to 4 944 t (approximately 7.5% increase)
- No changes to customary Maori or recreational allowances.

44. Option 2 proposes additional ACE be provided under s 68(1) of the Act. The best available information suggests that catches at current levels would be unlikely to cause the stock to decline. MPI considers this risk is low and Option 2 provides for some growth opportunities. The

management procedure concludes that a TAC increase of 344 tonnes could be made. With this increase, the Total Allowable Commercial Catch (TACC) would be 4944 tonnes.

45. Section 68(1) says that if a TAC is increased under s 13(7), the Minister must, under s 21(1) consider Maori customary non-commercial fishing interests, recreational interests and other fishing-related mortality and create additional ACE that equals the amount by which he would have increased the TACC, but for s 20(4). Any additional ACE will be allocated to existing quota owners.
46. Based on the 2011/2012 port price of \$0.73/kg, Option 2 would generate an additional \$251,120 of revenue compared to Option 1 (the status quo).
47. If increased, the TAC would revert to existing levels at the close of the 2012-13 fishing year on 30 September 2013 (s13(8) of the Act). ACE for 2013/14 will be based on the TACC at 1 October 2013. This paper does not propose changes to the TACC.
48. The effect on the price of ACE is unknown, under both options. It may be a reasonable assumption that it may rise under the status quo and potentially fall under Option 2.

FUTURE CONSIDERATIONS

49. Red cod on the east coast South Island lends itself to the provisions of Schedule 2 as an analysis of the recruitment-environment relationship shows there is a strong correlation between recruitment and environmental variables, with a periodic 14 month lag. Further, the east coast South Island trawl survey will be able, in future years, to provide more fishery-independent information on relative abundance, year class strength and recruitment into the fishery, which will contribute to the fine tuning of the management procedure.

INITIAL CONSULTATION

50. During March 2013, MPI had preliminary discussions with tangata whenua and some stakeholder representatives. MPI sought views on the options to be included in this paper.

Conclusions

51. The best available information suggests that current abundance is high and there may be opportunity for increased utilisation from RCO 3, at least in the short-term and that Option 2 would provide this.
52. MPI is seeking information and views from tangata whenua, fishery stakeholders and other interested parties to inform the review of in-season catch limits for RCO 3.
53. It is important to note that the Minister has broad discretion in exercising his powers of decision-making. He will make his own independent assessment of the information presented to him by both MPI and stakeholders before making a final decision.