

NEW ZEALAND RED ROCK LOBSTER FISHERIES

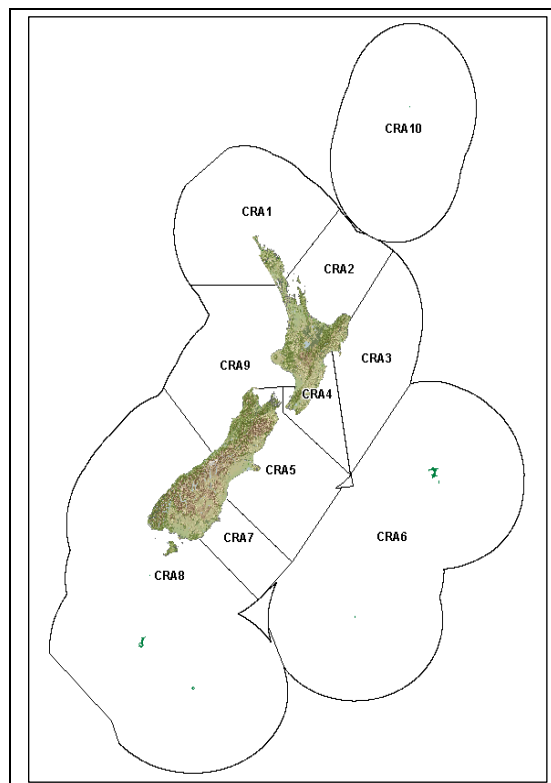
FINAL ADVICE

PAPER 1

ADOPT A MANAGEMENT PROCEDURE FOR CRA 4

PAPER 2

VARY SUSTAINABILITY MEASURES FOR CRA 3, CRA 4, CRA 7 AND CRA 8



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1. ADOPT A MANAGEMENT PROCEDURE FOR CRA 4

EXECUTIVE SUMMARY

1. In this paper you are asked to make a decision on the use of a management procedure to guide Total Allowable Catch (TAC) and Total Allowable Commercial Catch (TACC) setting in the Wellington/Hawke Bay rock lobster fishery (CRA 4).
2. When choosing whether or not to adopt the CRA 4 Management Procedure to guide TAC and TACC setting in CRA 4. The central consideration is whether the procedure meets the TAC setting requirements of s 13 of the Act. Section 13 requires you to set a TAC that moves the stock to, or maintains the stock at, a size at or above a level that can produce the maximum sustainable yield or that is not inconsistent with this objective. This stock size is commonly called Bmsy.
3. The NRLMG's initial advice proposed two management options for CRA 4:
 - Option 1** – Adopt the CRA 4 Management Procedure to Guide TAC and TACC setting in CRA 4 (*NRLMG preferred option*)
 - Option 2** – Continue to use Periodic Stock Assessments to Guide TAC setting in CRA 4 (*status quo*)
4. The NRLMG received seven submissions on its initial advice. The NRLMG has analysed these submissions and considers adoption of the CRA 4 Management Procedure is still the best option.
5. The NRLMG believes using the CRA 4 Management Procedure to guide TAC and TACC setting is in accordance with the Fisheries Act 1996 (the Act). Bmsy has not been reliably estimated for CRA 4. Nevertheless, the NRLMG is confident the CRA 4 Management Procedure is not inconsistent with the s 13 objective of maintaining the stock at or above or moving the stock towards or above a level that can produce the maximum sustainable yield because the procedure:
 - a) is expected, with greater than 90% probability, to maintain stock size above the target stock size currently accepted as a proxy for Bmsy
 - b) is designed to achieve a stock size that is, on average, *larger than* the 2008 stock size. Therefore, whether current stock size is above, at or below Bmsy, applying the procedure would increase the stock size either towards Bmsy, or towards a level above Bmsy.
6. Rock lobsters are important taonga to tangata whenua in CRA 4, are prized by amateur fishers, and have high commercial value. Therefore the second key consideration is the impact of the proposed procedure on utilisation value. The NRLMG believes customary Maori, amateur and commercial utilisation values would increase with application of the CRA 4 Management Procedure. This is because:
 - a) the procedure would improve fishing opportunities for all sectors by increasing the stock from its current size, and by maintaining, with high probability, an average stock size larger than both the current and target stock sizes
 - b) the procedure improves the “safety” of the CRA 4 stock by increasing TAC responsiveness to changes in abundance in the fishery
 - c) CRA 4 commercial stakeholders operated the procedure in 2007 and 2008 to guide voluntary commercial catch reductions with the express purpose of halting declining abundance to ensure the ongoing economic viability of the fishery.

FINAL PROPOSAL

The NRLMG recommends that you:

- (i) **agree** to adopt the CRA 4 management procedure to guide TAC and TACC setting in CRA 4

BACKGROUND

CRA 4 Stock Status

7. A stock assessment was last performed for CRA 4 in 2005 which indicated stock abundance was well above the target stock size, Bref, the average autumn-winter CPUE from 1979-88. The median expectation was that stock size would decline slightly over the subsequent three years but would remain above Bref. The average predicted reduction in stock size was six percent. Uncertainty around these median predictions was very high.
8. CPUE is considered a reliable indicator of relative abundance in CRA 4, and seasonal CPUE information suggests the CRA 4 stock size may have declined more than predicted by the 2005 stock assessment. The autumn-winter CPUEs declined from 0.728 kg/potlift in 2005, to 0.611 in 2006, and then to 0.527 in 2007. The CPUE increased in 2008 to 0.573 kg/potlift. These CPUE values are all higher than the minimum level observed since 1979 (0.412 in 1992), but are lower than the mean for the reference period 1979-88 (0.754). These historical values are not reference points, but they are closely related to the reference points based on the reference periods. In short, they suggest the stock is probably above Bmin but below Bref.
9. CRA 4 commercial stakeholders did not harvest the full TACC in 2004-05 (six tonne shortfall), in 2005-06 (72 tonne shortfall) or in 2006-07 (131 tonne shortfall). They voluntarily shelved 44% of annual catch entitlement (ACE) in 2007-08, and shelved 58% of ACE in 2008-09. Given the decline in CPUE over the same period, the NRLMG considers that the current TAC is probably not sustainable.
10. The NRLMG notes that current catch levels probably are sustainable. CRA 4 quota shareowners used the CRA 4 Management Procedure to guide voluntary ACE shelving in 2007-08 and 2008-09; the procedure's abundance indicator – autumn-winter CPUE – increased from 0.527 kg/potlift in 2007 to 0.573 kg/potlift in 2008.

Management Approach

11. The NRLMG's overriding management goal is for all rock lobster fisheries to be managed and maintained at or above the assessed and agreed biological reference points (targets), using a comprehensive approach that recognises a range of customary non-commercial, amateur, commercial and environmental concerns and values.

Biological Reference Points (or Sustainability Indicators)

12. When assessing harvest strategies for rock lobster fisheries, the NRLMG's key requirement is that a strategy will allow the population size to increase in each fishing year that it is below the target; or be maintained at or above the target level. This paper references two "target" levels:
 - a) The statutory target, **Bmsy**. Rock lobster stocks are managed under s 13 of the Act. Section 13 requires you to set a TAC that moves the stock towards, or maintains the stock at, a level at or above Bmsy, or that is not inconsistent with this objective. Bmsy is

not straightforward to estimate and uncertain when estimated; there is currently no reliable estimate of Bmsy for CRA 4.

- b) The proxy target , **Bref**. When a Bmsy estimate is absent or unreliable, alternative and proxy targets are used. Proxy targets are a way of setting a TAC that is not inconsistent with the objective of maintaining a stock at or above, or moving the stock towards a level that can maintain the maximum sustainable yield. This “not inconsistent” approach is allowed for by s 13(2A) of the Act where you consider that current biomass or Bmsy cannot be estimated reliably using best information. For CRA 4, the stock size associated with a reference period is used. In this period the stock showed good productivity and was demonstrably safe: it subsequently declined to lower levels and then recovered.
- 13. The NRLMG also uses a limit reference point, **Bmin**, to inform assessments of stock sustainability. Bmin is the stock size associated with lowest abundance in the observed history of the CRA 4 fishery.
 - 14. For all these indicators, CRA 4 stock size is measured in terms of the autumn-winter vulnerable biomass. “Vulnerable” biomass is the total quantity of lobsters available to the fishery (ie, it does not include lobsters that cannot be harvested such as undersize lobsters).
 - 15. In order to meet the management goal, the NRLMG has specified a minimum expected performance¹ in relation to these target and limit reference points, which is :
 - a) stock size that fluctuates around the target with at least 50% probability of achieving the target (Bmsy or Bref); and
 - b) stock size remains above the minimum (Bmin) with 90% probability.

Initial Advice Options

- 16. In Initial Advice Paper 1, the NRLMG proposed two management options to guide TAC setting in CRA 4. These options were:

Option 1 – Adopt the CRA 4 Management Procedure to Guide TAC and TACC Setting in CRA 4

- 17. Under Option 1, the CRA 4 Management Procedure would be used to guide statutory TAC setting decisions for CRA 4. The CRA 4 Management Procedure is described in detail in *Attachment 1* to these Final Advice Papers.
- 18. Under Option 1, the operation of the management procedure would guide TAC and TACC setting for CRA 4 for the 2009-10, 2010-11 and 2011-12 fishing years. During 2011, the management procedure would be reviewed.

Option 2 – Continue to use Periodic Stock Assessments to Guide TAC Setting in CRA 4 (status quo)

- 19. Under Option 2, periodic stock assessments (which are relatively infrequent due to resource constraints) would continue to guide TAC setting for CRA 4. Seasonal CPUE information would also be used to monitor stock abundance between stock assessments.

¹ In October 2008, MFish released the Harvest Strategy Standard for New Zealand Fisheries (the HSS) that specifies performance standards for Quota Management System species. The NRLMG has not had time to generate the necessary information to incorporate the policy into its advice but will include reporting against the HSS, if necessary to do so, as new stock assessments are undertaken.

20. Under Option 2, a CRA 4 stock assessment would be completed in 2009 to allow consideration of whether statutory TAC setting requirements were being met.

CONSULTATION AND SUBMISSIONS

21. Your decision whether or not to adopt the CRA 4 Management Procedure to guide TAC and TACC setting in CRA 4 is a decision that relates to TAC setting decisions under section 13 of the Act and therefore the consultation requirements of section 12 have been followed.
22. MFish consulted on the NRLMG's initial advice on your behalf between 15 December 2008 and 9 February 2009.
23. Consultation on the proposals were undertaken with such persons or organisations representative of those classes of persons having an interest in the stock or the effects of fishing on the aquatic environment in the area concerned, including national and regional Maori, environmental, commercial, and recreational interests. Further, provision was made for the input and participation of tangata whenua having a non-commercial interest in the stock or an interest in the effects of fishing on the aquatic environment in the area concerned, having particular regard to Kaitiakitanga.
24. The following organisations and individuals submitted on the NRLMG's Initial Advice Paper 1:

National Representative Organisations

- ◆ Te Ohu Kaimoana Trustee Limited (Te Ohu).
- ◆ New Zealand Recreational Fishing Council (RFC)
- ◆ New Zealand Rock Lobster Industry Council (NZ RLIC)

CRA 4 Regional Representative Groups

- ◆ Te Kupenga Whiturauroa a Maui Customary Fisheries Forum (Te Kupenga)
- ◆ Ngawi Sports Fishing Club (NSFC)

Individuals

- ◆ Antonino Muollo (Mr Muollo) – *a commercial fisher, processor and exporter in CRA 4*
- ◆ Edward Beetham (Mr Beetham) – *an amateur fisher in CRA 4*

25. Full copies of their submissions are attached as *Attachment 3* to these Final Advice Papers. Each submission is described, and the matters raised in the submission discussed, in the following sections as relevant.

Summary of Submissions

26. NSFC, RFC, NZ RLIC, Te Kupenga and Te Ohu all support adopting the CRA 4 Management Procedure to guide TAC and TACC setting in CRA 4. RFC and NSFC express concern about the state of the fishery and note its high value to recreational fishers. NZ RLIC (also writing for the CRA 4 Rock Lobster Industry Association) notes that the CRA 4 Management Procedure represents the best available information to guide TAC setting in CRA 4 for 2009-10 (and beyond).
27. Mr Beetham does not express support for a specific option but notes support for annual assessments being made on the CPUE of commercial fishers. Mr Beetham however believes stock assessments are still necessary before any change to the TAC or TACC are made.

28. Mr Muollo – a commercial fisher, processor and exporter operating in statistical area 915 on the Wellington South Coast - agrees in part with the proposal to adopt a CRA 4 Management Procedure to guide TAC and TACC setting in CRA 4. Mr Muollo however believes the CRA 4 Management Procedure places too much emphasis on catch rates in the Wairarapa statistical areas.
29. The NRLMG notes Mr Beetham, NSFC, RFC, Te Kupenga, Te Ohu and Mr Muollo suggest other or additional management interventions that are outside the scope of this advice process. These are set out in the 'Other Matters' section towards the end of Final Advice Paper 2.

NRLMG Discussion on Matters Raised in Submissions

30. Most submitters support the NRLMG preferred option to adopt the CRA 4 Management Procedure to guide TAC and TACC setting in CRA 4 (Option 1). In general, these submitters agreed the CRA 4 stock may be below the target level and management action is required to increase stock size.
31. Te Ohu recommends MFish work with Te Ohu to ensure iwi are provided the opportunity to be involved in the development of a CRA 4 Management Procedure. The NSFC also noted the need for science providers to consult with local fishermen on a regular basis to listen to their views. The NRLMG notes adopting the CRA 4 Management Procedure would provide a mechanism to address the issue of a potentially unsustainable TAC quickly (ie, from April 2009). Applications of the procedure:
 - a) would improve fishing opportunities for all sectors by increasing the stock from its current size, and by maintaining, with high probability, an average stock size larger than both the current and target stock sizes
 - b) would improve the "safety" of the CRA 4 stock by increasing TAC responsiveness to changes in abundance in the fishery.
32. If adopted, the CRA 4 Management Procedure would be reviewed in 2011. The three year period provides time for new and more certain information to be developed and for further discussions with tangata whenua and stakeholders on future management approaches.
33. Mr Muollo believes the CRA 4 Management Procedure has too much emphasis on catch rates in the Wairarapa statistical areas and the procedure needs to be adapted to incorporate the spring/summer season and changes in export condition which ultimately drives when lobsters are caught.
34. The NRLMG confirms that catch rates in the statistical area (915) Mr Muollo fishes are currently higher than other parts of the CRA 4 fishery. Catch rates do differ from area to area within quota management areas because of, among other things, differing habitat types and levels of fishing effort. The CPUE analysis that informs the CRA 4 Management Procedure takes into account differing catch rates across statistical areas and time of year. Whilst the management procedure does not explicitly incorporate spring/summer catch or export information, science advisors to the NRLMG note that autumn-winter CPUE provides a reliable abundance indicator for CRA 4. Furthermore, because there is a strong relationship between autumn-winter and spring-summer CPUE, managing a stock at or above a reference point based on autumn-winter CPUE ensures that the spring-summer abundance in the following season will meet sustainability objectives.
35. Mr Beetham believes stock assessments are still necessary before any change to either increase or decrease the TAC or TACC are made. The NRLMG notes continuing to use periodic stock assessments to guide TAC setting in CRA 4 is less responsive to observed changes in stock

abundance in the fishery, and provides lesser certainty of achieving desired sustainability and utilisation outcomes.

ASSESSMENT OF MANAGEMENT OPTIONS

36. Assessment of the management options against statutory criteria is set out at the end of this Final Advice Paper. Key considerations and impacts are discussed below.

Option 1 – Adopt the CRA 4 Management Procedure to Guide TAC and TACC Setting in CRA 4

Sustainable Utilisation

37. Simulation-testing of the CRA 4 Management Procedure shows it to be very safe with respect to sustainability indicators. The procedure is expected to maintain stock size above both B_{ref} and B_{min} with high probability.
38. The NRLMG acknowledges that it does not have a reliable estimate of the statutory target, B_{msy}. However, the NRLMG is confident the proposed three-year application of the CRA 4 Management Procedure is consistent with the statutory target because:
- a) B_{ref} has previously been accepted by the MFish Plenary as a suitable proxy for B_{msy} and the procedure is expected to maintain stock size above this proxy target with very high probability, and
 - b) the procedure is designed to achieve a stock size that is, on average, *larger than* the current stock size. Therefore, whether current stock size is above, at or below B_{msy}, applying the procedure would increase the stock size either towards B_{msy}, or towards a level above B_{msy}.
39. The NRLMG also acknowledges that there is significant uncertainty in information on the CRA 4 fishery. The procedure has been tested for robustness to uncertainties in information, including uncertainties in recruitment assumptions, in the level of non-commercial catches and in stock assessment results. The procedure was robust to these uncertainties in that performance against the sustainability indicators was maintained.

Utilisation Value

40. Simulation-testing of the CRA 4 Management Procedure suggests that, as well as maintaining safe stock levels, the CRA 4 Management Procedure would provide for good utilisation.
41. The testing indicates the management procedure would:
- a) improve fishing opportunities for all sectors. Over the 20-year testing horizon the procedure delivered an average annual catch larger than the current estimated catch and an annual average CPUE higher than the current CPUE
 - b) the procedure improves the certainty of outcomes by being more responsive to changes in abundance in the fishery.
42. In the short term, commercial stakeholders are likely to be significantly negatively affected by operation of the procedure. CPUE is currently well below the target CPUE specified in the CRA 4 Management Procedure and therefore significant cuts to the TAC and TACC will likely occur to move CPUE back towards the target. The NRLMG notes that CRA 4 commercial stakeholders have implemented the procedure voluntarily since 2007 and so have already demonstrated a

willingness to accept these short term impacts to achieve the longer-term benefits of applying the procedure.

43. Information on customary Maori and amateur catches is highly uncertain (although customary Maori information is improving). Current allowances made for customary, amateur and illegal fishing are estimated to be under-caught. The NRLMG notes that it is unlikely to receive, within the three-year application of the CRA 4 Management Procedure, information of sufficient quality to enable an assessment of whether and how allowances should be adjusted.
44. The NRLMG considers the most robust approach is to maintain existing allowances and review the situation in three years, in consultation with tangata whenua and stakeholders.

Credibility and Acceptance

45. Management procedures are simpler for people to understand than stock assessments. They therefore tend to attract more interest and support.
46. As noted, the CRA 4 Management Procedure already has a very high degree of acceptance and support among CRA 4 quota shareowners and fishers, who have used the procedure voluntarily since 2007 to constrain commercial catches.
47. Adopting the CRA 4 Management Procedure reduces the frequency of stock assessments, freeing resources for other research and potentially reducing costs to commercial stakeholders.
48. The NRLMG notes that Zone 5 Big Game Fishing Council Clubs (Zone 5 encompasses the CRA 4 area) have implemented a voluntary daily bag limit reduction (from 6 lobsters per person per day to 4) to support the voluntary commercial reductions and efforts to increase abundance in the fishery. This initiative has been supported by Te Kupenga.

Option 2 – Continue to use Periodic Stock Assessments to Guide TAC Setting in CRA 4 (status quo)

49. Compared with Option 1, continuing to use periodic stock assessments to guide TAC setting for CRA 4:
 - a) is less responsive to observed changes in stock abundance in the fishery
 - b) provides lesser certainty of achieving desired sustainability and utilisation outcomes
 - c) appears to have less support among tangata whenua and stakeholders in CRA 4
 - d) may result in higher research costs to CRA 4 commercial stakeholders, and less efficient allocation of available research resources.

OTHER MANAGEMENT ISSUES

50. Operation of the CRA 4 Management Procedure (Option 1) for the 2009-10 fishing year would result in TAC and TACC decreases for CRA 4. Final Advice Paper 2 provides advice on the TAC and TACC adjustments proposed for CRA 4 if the CRA 4 Management Procedure were to be adopted.

CONCLUSION

51. Adopting the CRA 4 Management Procedure would provide a mechanism to address the issue of a potentially unsustainable TAC quickly (ie, from 1 April 2009). Adoption of the procedure would also reduce the frequency of stock assessments, freeing resources for other research and potentially reducing costs to commercial stakeholders.
52. The CRA 4 Management Procedure already has a very high degree of acceptance and support among CRA 4 quota shareowners and fishers, who have used the procedure voluntarily since 2007 to constrain commercial catches. Customary Maori and amateur fishing representatives in CRA 4 have also indicated support for a management procedure approach.
53. The NRLMG believes customary Maori, amateur and commercial utilisation values would increase with application of the CRA 4 Management Procedure. This is because:
 - a) the procedure would improve fishing opportunities for all sectors by increasing the stock from its current size, and by maintaining, with high probability, an average stock size larger than both the current and target stock sizes
 - b) the procedure improves the “safety” of the CRA 4 stock by increasing TAC responsiveness to changes in abundance in the fishery.
54. The NRLMG notes the CRA 4 Management Procedure would be applied for three years and then reviewed. The three year period provides time for new and more certain information to be developed and for further discussions with tangata whenua and stakeholders on future management approaches.

NRLMG RECOMMENDATION

55. The NRLMG recommends that you:

- (i) **agree** to adopt the CRA 4 management procedure to guide TAC and TACC setting in CRA 4 (Option 1).

56. If for any reason you consider the CRA 4 management procedure unsuitable, the NRLMG recommends that you:

- (ii) **agree** to continue to use periodic stock assessments to guide TAC setting in CRA 4 (status quo)

57. **Note**, if you choose option (i) above, a review of the management procedure will be conducted in 2011.

58. **Note**, if you choose option (ii) above, a CRA 4 stock assessment would be completed in 2009 and used to inform TAC setting for the 2010-11 fishing year.

STATUTORY CONSIDERATIONS

59. The following statutory considerations have been taken into account when forming the management options for CRA 4 in this paper:

International Obligations and Treaty of Waitangi Settlement Act 1992 (s 5)

60. **Section 5** of the Act requires you to act in a manner consistent with New Zealand's international obligations and Treaty of Waitangi (Fisheries Claims) Settlement Act 1992. To this end, the provisions of general international instruments such as UNCLOS and the Fish Stocks Agreement have been implemented through the provisions of the Act. The NRLMG is not aware of any specific international obligations relating to rock lobster fisheries. The proposed options are consistent with the obligations relating to the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992.
61. The NRLMG recognises that rock lobster (koura) is an important taonga species, and notes that Option 1 - the proposed management procedure - is expected to maintain stocks at a level above the current stock level and therefore improve fishing opportunities for all sectors. Option 2 is riskier in that stock abundance may be below the target. Should you choose this option, the risk is mitigated by the NRLMG commitment to undertake further analysis and provide further advice in 2009. The NRLMG notes that Maori commercial fishing interests have had opportunities to input into the development of the CRA 4 Management Procedure through membership of the CRA 4 commercial stakeholder organisation. NRLMG members have also sought and received ideas and input from some CRA 4 customary Maori fishing interests on preferred approaches to TAC setting.

Purpose of the Act (s 8)

62. **Section 8** of the Act describes the purpose of the Act as being to provide for the utilisation of fisheries resources while ensuring sustainability, and defines the meanings of utilisation and sustainability. The management options presented seek to achieve the purpose of the Act. The proposals seek to ensure TACs are set sustainably and take into account the respective costs of management versus utilisation benefits.

Environmental considerations (s 9)

63. **Section 9** of the Act prescribes the following environmental principles that must be taken into account when exercising powers in relation to utilisation of fisheries resources while ensuring sustainability:
- a) **Section 9(a)** requires that associated or dependent species (ie, those that are not harvested) should be maintained above a level that ensures their long-term viability. Potting and hand gathering fisheries have a relatively low level of by-catch and the NRLMG is not aware of any interactions between the fisheries and non-harvested species of concern.
 - b) **Section 9(b)** requires the maintenance of biological diversity of the aquatic environment be taken into account. The decision on whether to adopt a management procedure to guide TAC setting in CRA 4 does not directly impact on the long term viability and biological diversity of the aquatic environment in CRA 4.
 - c) Section 9(c) requires you to take into account the principle that habitat of particular importance for fisheries management should be protected. The NRLMG is not aware of any such habitats that are affected by the CRA 4 fishery.

Information Principles (S 10)

64. **Section 10** of the Act sets out the information principles, which require that decisions be based on the best available information, taking into account any uncertainty in that information, and applying caution when information is uncertain, unreliable, or inadequate. In accordance with s 10, the absence of information should not be used as a reason to postpone, or fail to take, any measure to achieve the purpose of the Act, including providing for utilisation at levels considered to be sustainable. A thorough review of available information has been undertaken by the NRLMG and the best available information has been used to evaluate the management options presented. The NRLMG has endeavoured to set out the relevant uncertainty in, and inadequacy of, that information so that the appropriate caution can be applied in assessing the proposed management options.

Sustainability Measures (s 11)

65. **Sections 11(1)(a), (b) and (c)** set out matters you must take into account when varying sustainability measures such as the TAC for CRA 4, including any effects of fishing on any stock and the aquatic environment, any existing controls under the Act that apply to the stock or area concerned, and the natural variability of the stock. Such matters will be addressed directly in consultation papers that seek quantum variations to the TAC as a result of application of the proposed management procedure (Option 1) or stock assessment (Option 2). The NRLMG notes, however, that recruitment into rock lobster stocks is highly variable and that this variability is taken into account by stock assessment scientists when developing and testing management procedures and undertaking stock assessments CRA 4. Existing controls under the act are also considered during these processes.
66. **Sections 11(2)(a) and (b)** require you to have regard to any provisions of any regional policy or plan under the Resource Management Act 1991 and any management strategy or plan under the Conservation Act 1997 that apply to the coastal marine area and are considered relevant when varying the TAC for CRA 4. The NRLMG is not aware of any such provisions that should be taken into account.
67. **Section 11(2A)(b)** requires you to take account of any relevant and approved fisheries plans when varying the TAC in CRA 4. There is no approved fisheries plan in place for CRA 4. The NRLMG is aware that Ngati Kahungunu is in the process of developing a fisheries plan relating to Ngati Kahungunu fisheries.
68. **Sections 11(2A)(a) and (c)** require you to take into account any conservation or fisheries service, or any decision not to require such services, when varying a TAC. The NRLMG is not aware of any proposed services that affect the CRA 4 stock. No decision has been made to not require such a service in CRA 4 at this time.

TAC Setting Considerations (s 13)

69. **Section 13:** Rock lobster stocks are managed under s 13 of the Act. Under s 13(2) you must set a total allowable catch that:
- a) maintains the stock at or above a level that can produce the maximum sustainable yield, having regard to the interdependence of stocks; or
 - b) enables the level of any stock whose current level is below that which can produce the maximum sustainable yield to be altered—

- (i) in a way and at a rate that will result in the stock being restored to or above a level that can produce the maximum sustainable yield, having regard to the interdependence of stocks; and
 - (ii) within a period appropriate to the stock, having regard to the biological characteristics of the stock and any environmental conditions affecting the stock; or]
 - c) enables the level of any stock whose current level is above that which can produce the maximum sustainable yield to be altered in a way and at a rate that will result in the stock moving towards or above a level that can produce the maximum sustainable yield, having regard to the interdependence of stocks.
70. In the case of *Antons Trawling Company v The Minister of Fisheries* (High Court, Wellington, CIV 2007-485-2199, 28 February 2008) Miller J said that before a TAC could be set under the above provisions the Minister must be provided with an estimate of both current biomass and the biomass that can produce the maximum sustainable yield. Neither of these figures are available for Rock Lobster so s 13 (2A), which was passed as a consequence of Miller J’s decision, becomes applicable.
71. **Section 13(2A)** says that:
- (2A) For the purposes of setting a total allowable catch under this section, if you consider that the current level of the stock or the level of the stock that can produce the maximum sustainable yield is not able to be estimated reliably using the best available information, you must—
- a) not use the absence of, or any uncertainty in, that information as a reason for postponing or failing to set a total allowable catch for the stock; and
 - b) have regard to the interdependence of stocks, the biological characteristics of the stock, and any environmental conditions affecting the stock; and
 - c) set a total allowable catch—
 - (i) using the best available information; and
 - (ii) 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.
72. It is the NRLMG’s view that the measures advanced in this paper meet the requirement of being “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.”
73. In considering the way in which and rate at which a stock is moved towards or above a level that can produce maximum sustainable yield under subsection (2)(b) or (c), or (2A) (if applicable), you shall have regard to such social, cultural, and economic factors as he or she considers relevant. The CRA 4 Management Procedure (Option 1) is an adaptive procedure using a rule which is based on current data derived from the fishery and would act to move the stock quickly towards the target as abundances change. The NRLMG notes that the procedure is expected to maintain stock size above the target stock size with high probability.
74. The NRLMG has no information on which to base the evaluation of Option 2, as modelling work has not been undertaken on alternative TAC setting options.

TACC Setting Considerations (s 20 and 21)

75. **Section 20 and 21** specify a number of matters that must be taken into account when setting or varying a TACC. Section 21 requires you to allow for non-commercial Māori and amateur fishing interests, and other sources of fishing-related mortality when setting or varying the TACC. These allowances will be considered and provided for when quantum changes to the TAC are proposed.
76. **Section 21(4)** also requires that any mātaitai reserve or closures/restrictions under s 186A to facilitate customary Maori fishing be taken into account. Mātaitai reserves and section 186A closures are located within CRA 4 – the Moremore Mātaitai Reserves (Hawke Bay) and the Pukerua Bay 186A closure (Wellington). The NRLMG considers that both management options presented in this paper will contribute to a larger and more sustainable CRA 4 stock that will benefit abundance both inside and outside mātaitai reserves and s 186A closures.
77. **Section 21(5)** also requires that any regulations to prohibit fishing made under s 311 be taken into account when setting allowances for amateur fishing interests. The NRLMG is not aware of any restrictions under s 311 that have been placed on fishing in any area within CRA 4.

2. SUSTAINABILITY MEASURES FOR CRA 3, CRA 4, CRA 7 & CRA 8

EXECUTIVE SUMMARY

76. You are being asked to make decisions on Total Allowable Catches (TACs) and allowances for the four rock lobster fisheries for the 2009-10 fishing year beginning 1 April 2009. The fisheries are CRA 3 (Gisborne); CRA 4 (Wellington/Hawke Bay) CRA 7 (Otago); and CRA 8 (Southern).

CRA 3 (Gisborne)

77. For CRA 3, there is no agreement within the NRLMG on a recommended TAC and allowances option. The group therefore proposes three management options for your consideration:

| | |
|----------|---|
| OPTION A | (i) Decrease the TAC from 319 tonnes to 293 tonnes; <i>And, to achieve the decrease,</i> (ii) Decrease the TACC only from 190 tonnes to 164 tonnes. |
| OPTION B | (i) Decrease the TAC from 319 tonnes to 257 tonnes; <i>And, to achieve the decrease,</i> (ii) Decrease the TACC only from 190 tonnes to 128 tonnes. |
| OPTION C | (i) Decrease the TAC from 319 tonnes to 257 tonnes; <i>And, to achieve the decrease,</i> (ii) Decrease the TACC from 190 tonnes to 134 tonnes; <i>and</i> (iii) Decrease the recreational allowance from 20 tonnes to 14 tonnes. |

78. **Note:** It is proposed that, irrespective of the option chosen for CRA 3 this year, a management procedure will be developed during 2009 for this stock for your consideration, which, if adopted, will guide TAC setting from 1 April 2010.
79. The CRA 3 2008 stock assessment indicates that current stock size is below the target level. Under current catches and recent recruitments the assessment model predicts a 75% probability that stock size will decline over the next four years. The NRLMG therefore considers retaining the existing TAC and associated allowances is not a viable management option.
80. In respect of the three options presented, the NRLMG notes that:
- a) All options are consistent with the requirement of s 13 of the 1996 Act to set a TAC that moves the stock towards the target level, Bmsy.

Information is uncertain but Options B and C are more likely to result in an increase in stock size over a four year time period than Option A. However, it is intended that the proposed TACs apply for one year only. Irrespective of the option chosen for CRA 3 this year, a management procedure will be developed during 2009 for this stock for your consideration, which, if adopted, will guide TAC setting from 1 April 2010. A key aim of the management procedure will be to achieve and maintain target stock size with a high degree of certainty.
 - b) When deciding the appropriate way and rate of rebuild of a stock that is below the target level, the 1996 Act requires you to have regard to such social, cultural, and economic factors you consider relevant. The NRLMG notes, in terms of the intended one-year TAC options presented:
 - i. Option A minimises the cost to, and the rate of adjustment required by, commercial sector stakeholders in the short-term (1 year); and

- ii. Option B maximises the fish left in the water in the short-term (1 year) and therefore the potential benefits accruing to non-commercial social, cultural, and economic fishing values.
- c) When setting or varying a TACC, you are required to allow for non-commercial Māori and amateur fishing interests, and other fishing mortality. The NRLMG notes:
- i. None of the options act to constrain non-commercial fishing effort;
 - ii. Option C, which proposes a six tonne decrease in the recreational allowance, is the only option to reduce a non-commercial allowance. Option C shares the pain of the TAC cut between commercial and amateur fishers. MFish notes that, as no information is available to confirm total amateur catch and no mechanism is proposed to actively reduce total amateur catch, this option may not be credible or effective at achieving the desired reduction in total catch.
81. The NRLMG notes there was no agreement among submitters about the best TAC or allocation option for CRA 3.

CRA 4 (Wellington/Hawke Bay)

82. The NRLMG recommends that you decrease the TAC for CRA 4 from 771 tonnes to 460 tonnes. The recommended decrease is the result of the operation of the management procedure the NRLMG is recommending you adopt to guide TAC setting for CRA 4 in Final Advice Paper 1.
83. Information on the status of the CRA 4 stock is uncertain and no reliable estimate of the statutory target, Bmsy, is available at this time. Best available information on CRA 4 stock status suggests a stock that has been declining for some time, is now below the accepted proxy target reference level, Bref, and would probably decline further if the current TACC was caught in full in 2009-10. The recommended decrease in the TAC, and ongoing application of the CRA 4 Management Procedure, is expected to move the stock quickly towards Bref and therefore is not inconsistent with the statutory objective of moving the stock towards Bmsy.
84. To achieve the decrease in the TAC, the NRLMG recommends that you decrease the TACC only from 577 tonnes to 266 tonnes. NZ RLIC and the CRA 4 Rock Lobster Industry Association support this recommended allocation (ie, a TACC cut only) but emphasise the need to ensure catches by other sectors remain within the allowances.
85. Submissions from national and regional representative tangata whenua and sector organisations support the proposed catch reductions. One submitter did not support the decrease, noting that catch rates in his area were high. The NRLMG notes TACs are set for the whole quota management area and therefore must take into account the status of the fishery as a whole.

CRA 7 (Otago)

86. The NRLMG recommends that you increase the TAC for CRA 7 from 143.88 tonnes to 209 tonnes.
87. The recommended increase to the TAC of CRA 7 is the result of the operation of a management procedure adopted by the previous Minister in March 2008 to guide TAC setting for this stock. The NRLMG has reviewed best available information and has found nothing that would warrant the you setting aside the management procedure for 2009-10.
88. Some submitters consider you should take a cautious approach to TAC setting and retain the existing TAC and allowances. The NRLMG notes best available stock information indicates the

CRA 7 stock size is well above the target level and has been for several years. The NRLMG considers the existing management approach is cautious because application of the CRA 7 Management Procedure is expected to maintain an average stock size well above the target level.

89. To achieve the increase in TAC, the NRLMG recommends that you increase the TACC only from 123.88 tonnes to 189 tonnes. Some submitters put forward alternative approaches to allocation. Because information on non-commercial harvest is scarce and unreliable, the NRLMG believes maintaining stock size well above the target level with high certainty represents a more reliable approach to providing for good non-commercial harvest and avoiding inter-sector conflict at this time.

CRA 8 (Southern)

90. The NRLMG recommends that you increase the TAC for CRA 8 from 1053 tonnes to 1110 tonnes.
91. The recommended increase to the TAC of CRA 8 is the result of the operation of a management procedure adopted by the previous Minister in March 2008 to guide TAC setting for this stock. The NRLMG has reviewed best available information and has found nothing that would warrant the you setting aside the management procedure for 2009-10.
92. One submitter considered you should take a cautious approach to TAC setting and retain the current TAC. The NRLMG notes best available stock information indicates the CRA 8 stock size is well above the target level and has been for several years. The NRLMG considers the existing management approach is cautious because application of the CRA 8 Management Procedure is expected to maintain an average stock size well above the target level.
93. To achieve the increase in TAC, the NRLMG recommends that you increase the TACC from 966 tonnes to 1019 tonnes and increase the recreational allowance from 29 tonnes to 33 tonnes.
94. This option was not presented in the IPP. The NRLMG initial advice preferred option was to increase the CRA 8 TAC as stated but to achieve the increase by adjusting the TACC only. Based on information provided in submissions, the NRLMG agree it is more constructive to achieve the increase by increasing both the TACC and the recreational allowance.

Other Matters

95. In addition to commenting on the proposed sustainability measures for CRA 3, CRA 4, CRA 7 and CRA 8, many submitters commented on or proposed other management measures that are outside the scope of this advice process. These included: finer scale fisheries management; amateur local management areas; improved information on non-commercial harvest; improved efforts to reduce illegal removals; removal or review of commercial concession fisheries; introduction of closed seasons; vessel Monitoring System (VMS) on all inshore commercial vessels; and, increased tangata whenua and stakeholder involvement in rock lobster management. These management measures are discussed briefly in the paper.

SUMMARY OF NRLMG FINAL PROPOSALS

96. **For CRA 3**, there is no agreement within the NRLMG on a recommended position. The group therefore proposes three management options for your consideration:

| | |
|-----------|--|
| OPTION A* | (i) decrease the TAC from 319 tonnes to 293 tonnes; <i>And, to achieve the decrease,</i> (ii) decrease the TACC only from 190 tonnes to 164 tonnes. |
| OPTION B* | (i) decrease the TAC from 319 tonnes to 257 tonnes; <i>And, to achieve the decrease,</i> (ii) decrease the TACC only from 190 tonnes to 128 tonnes. |
| OPTION C* | (i) decrease the TAC from 319 tonnes to 257 tonnes; <i>And, to achieve the decrease,</i> (ii) decrease the TACC from 190 tonnes to 134 tonnes; <i>and</i> (iii) decrease the recreational allowance from 20 tonnes to 14 tonnes. |

***All options include development of a management procedure for application from 1 April 2010.**

97. The NRLMG considers the status quo (retain existing TAC and allowances) is not a viable management option for the CRA 3 fishery, given the available information on stock status.

98. **For CRA 4**, the NRLMG recommends that, guided by the CRA 4 Management Procedure, you:

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|---|
| (i) decrease the TAC from 771 tonnes to 460 tonnes; <i>And, to achieve the decrease,</i> (ii) decrease the TACC only from 577 tonnes to 266 tonnes. |
|---|

99. This recommended option is the same as the preferred option identified in NRLMG initial advice.

100. **For CRA 7**, the NRLMG recommends that, guided by the CRA 7 Management Procedure, you:

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|---|
| (i) increase the TAC from 143.88 tonnes to 209 tonnes; <i>And, to achieve the increase,</i> (ii) increase the TACC only from 123.88 tonnes to 189 tonnes. |
|---|

101. This recommended option is the same as the preferred option identified in NRLMG initial advice.

102. **For CRA 8**, the NRLMG recommends that, guided by the CRA 8 Management Procedure, you:

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| (i) increase the TAC from 1053 tonnes to 1110 tonnes; <i>And, to achieve the increase,</i> (ii) increase the TACC from 966 tonnes to 1019 tonnes; <i>and</i> (iii) increase the recreational allowance from 29 tonnes to 33 tonnes. |
|---|

103. This option was not presented in the NRLMG’s initial advice. In the NRLMG initial advice the preferred option was to increase the CRA 8 TAC to 1110 tonnes but to achieve the increase by adjusting the TACC only. Based on information provided in submissions, the NRLMG agrees it is more constructive to achieve the increase by increasing both the TACC and the recreational allowance.

MANAGEMENT FRAMEWORK FOR ROCK LOBSTER FISHERIES

104. The NRLMG framework for managing rock lobster fisheries, and the attendant recommendations of the NRLMG, are consistent with expectations of a robust and enduring harvest strategy leading to a continuing utilisation of rock lobster stocks whilst ensuring sustainability, and are consistent with the statutory obligations of the Fisheries Act 1996 (the Act).

Management Goal

105. The NRLMG's overriding management goal is for all rock lobster fisheries to be managed and maintained at or above the assessed and agreed biological reference points (targets), using a comprehensive approach that recognises a range of customary non-commercial, amateur, commercial and environmental concerns and values.

Strategies to Achieve Goal

106. When assessing management strategies, the NRLMG's key requirement is that a strategy will allow the population size to increase in each fishing year that it is below the target; or be maintained at or above the target level. This advice paper references two "target" levels:
- a) The statutory target, **Bmsy**. Rock lobster stocks are managed under s 13 of the Act. Section 13 requires you to set TACs for rock lobster stocks that move the stocks to, or maintain the stocks at, a level at or above Bmsy, or that is not inconsistent with this objective. Bmsy is not straightforward to estimate and often uncertain when estimated.
 - b) The proxy target, **Bref**. When a Bmsy estimate is absent or unreliable, alternative and proxy targets are used. Proxy targets are a way of setting a TAC that is not inconsistent with the objective of maintaining a stock at or above, or moving the stock towards a level that can maintain the maximum sustainable yield. This "not inconsistent" approach is allowed for by s13(2A) of the Act where you consider that current biomass or Bmsy cannot be estimated reliably using best information. Bref is generally a stock size at or above the stock size associated with a period in the fishery that showed good productivity and was demonstrably safe.
107. The NRLMG also uses a limit reference point, **Bmin**, to inform assessments of stock sustainability. Bmin is a minimum biomass indicator and is usually either the stock size associated with lowest abundance in the observed history of the fishery or ½ Bref.
108. In order to meet the management goal the NRLMG has specified a minimum expected performance² in relation to these target and limit reference points, which is:
- a) stock size that fluctuates around the target with at least 50% probability of achieving the target (Bmsy or Bref); and
 - b) stock size remains above the minimum (Bmin) with 90% probability.

² In October 2008, MFish released the Harvest Strategy Standard for New Zealand Fisheries (the HSS) that specifies performance standards for Quota Management System species. The NRLMG has not had time to generate the necessary information to incorporate the policy into its advice but will include reporting against the HSS, if necessary to do so, as new stock assessments are undertaken.

Harvest Strategies

109. The NRLMG pursues a dynamic harvest strategy for rock lobster fisheries. It is willing to consider and recommend TAC changes in two situations:
- a) where stock modelling demonstrates that, after a TAC change, abundance is likely to move towards agreed biological reference points within an agreed period; and
 - b) where a TAC change is triggered by a fully tested and accepted management procedure (including a harvest control rule) designed either to rebuild a stock unit or to maintain the stock unit near an agreed biological reference point.
110. The extent of change in stock size that should be sought is determined after consideration of:
- a) economic and social factors including:
 - i. the economic cost and benefits, social factors and rate of adjustment to the fishing industry,
 - ii. the availability of rock lobster to Maori and amateur fishing groups,
 - iii. the economic return from the fishery; and
 - b) biological and environmental factors including:
 - i. the uncertainty in the assessment of stock size and other biological parameters, and
 - ii. the risk to the population; and
 - c) the timeframe over which the management options will have effect.

PROPOSED MANAGEMENT INTERVENTIONS

111. A review of rock lobster fishstocks for the 2009-10 rock lobster fishing year beginning 1 April 2009 resulted in proposals to vary TACs and allowances for four stocks:
- a) CRA 3 - updated stock modelling indicates CRA 3 is below the target stock size and is likely to decline over the next four years at current catch levels. All members of the NRLMG agree a reduction in catch is necessary to move the stock back towards the target. However, NRLMG members do not agree on a reduction quantity or allocation model. You are therefore being asked to choose between options that may result in different availability of rock lobster and different economic, social and cultural costs and benefits for fishery participants in the 2009-10 fishing year. (National representative bodies and the CRA 3 Multi-stakeholder Fishing Forum support development of a management procedure to apply from 1 April 2010; availability of rock lobster, and economic, social and cultural costs and benefits are therefore likely to change in 2010 and become a function of the objectives built into the management procedure by stakeholders.)
 - b) CRA 4 - the proposed variations to the CRA 4 TAC and allowances is the result of the operation of a new management procedure. In Final Advice Paper 1, you are being asked to adopt the procedure to guide TAC setting in CRA 4 for the next three years.
 - c) CRA 7 - the proposed variations to the CRA 7 TAC and allowances are the result of the operation of a fully tested and accepted management procedure.

- d) CRA 8 - the proposed variations to the CRA 8 TAC and allowances are the result of the operation of a fully tested and accepted management procedure.

112. The NRLMG provided you with initial advice on these fishstocks on 15 December 2008. The NRLMG's initial advice is provided as *Attachment 4* and fulfils the role of the MFish IPP – providing the NRLMG's initial views on sustainability measures for rock lobster fisheries and forming the basis for statutory consultation with tangata whenua and stakeholders.

CONSULTATION AND SUBMISSIONS

113. MFish consulted on the NRLMG's initial advice on your behalf between 15 December 2008 and 9 February 2009. Consultation on the proposals was undertaken with such persons or organisations representative of those classes of persons having an interest in the stock or the effects of fishing on the aquatic environment in the area concerned, including national and regional Maori, environmental, commercial, and recreational interests. Further, provision was made for the input and participation of tangata whenua having a non-commercial interest in the stock or an interest in the effects of fishing on the aquatic environment in the area concerned, having particular regard to Kaitiakitanga.

114. The following organisations and individuals submitted on the NRLMG's initial advice:

National Representative Organisations

- ◆ Te Ohu Kaimoana Trustee Limited (Te Ohu)
- ◆ New Zealand Recreational Fishing Council (RFC)
- ◆ New Zealand Rock Lobster Industry Council (NZ RLIC)

Regional Representative Organisations, Groups or Companies

CRA 3

- ◆ Ngati Porou Seafoods Limited (NPSL)
- ◆ Recreational CRA 3 Working Group Members (CRA 3 Recreational)
- ◆ Members of the Hauraki Gulf Bay of Plenty Recreational Forum (BOP Forum)
- ◆ Tairāwhiti Earth Centre (TEC)

CRA 4

- ◆ Te Kupenga Whiturāroa a Maui Customary Fisheries Forum (Te Kupenga)
- ◆ Ngawi Sports Fishing Club (NSFC)

CRA 7

- ◆ Te Runanga o Otakou Incorporated (Otakou Runanga)
- ◆ East Otago Taiapure Management Committee (ETMC)

CRA 8

- ◆ CRA 8 Management Committee Incorporated (CRAMAC 8)

Individuals

- ◆ Kennedy (Mr Kennedy) – *an amateur fisher in CRA 3*
- ◆ Edward Beetham (Mr Beetham) – *an amateur fisher in CRA 4*
- ◆ Antonino Muollo (Mr Muollo) – *a commercial fisher, processor and exporter in CRA 4*
- ◆ Brendan Flack (Mr Flack) – *a takata tiaki in CRA 7*

- ◆ Nelson Cross (Mr Cross) – *an amateur fisher in CRA 7*
- ◆ Noel Parker (Mr Parker) – *an amateur fisher in CRA 7*
- ◆ Ted Young (Mr Young) – *an amateur fisher with interests in CRA 7 and CRA 8*

115. Full copies of their submissions are attached as *Attachment 3*. Each submission is described, and the matters raised in the submission discussed, in the following sections as relevant.

CRA 3 (GISBORNE ROCK LOBSTER FISHERY)

Final Proposal

116. For CRA 3, there is no agreement within the NRLMG on a recommended position. The group therefore proposes three management options for your consideration:

| | |
|----------|---|
| OPTION A | (i) Decrease the TAC from 319 tonnes to 293 tonnes; <i>And, to achieve the decrease,</i> (ii) Decrease the TACC only from 190 tonnes to 164 tonnes. |
| OPTION B | (i) Decrease the TAC from 319 tonnes to 257 tonnes; <i>And, to achieve the decrease,</i> (ii) Decrease the TACC only from 190 tonnes to 128 tonnes. |
| OPTION C | (i) Decrease the TAC from 319 tonnes to 257 tonnes; <i>And, to achieve the decrease,</i> (ii) Decrease the TACC from 190 tonnes to 134 tonnes; <i>and</i> (iii) Decrease the recreational allowance from 20 tonnes to 14 tonnes. |

117. **Note:** It is proposed that, irrespective of the option chosen for CRA 3 this year, a management procedure will be developed during 2009 for this stock for your consideration, which, if adopted, will guide TAC setting from 1 April 2010.
118. The NRLMG considers the status quo (retaining the existing TAC and associated allowances) is not a viable management option for the CRA 3 fishery, given the available information on stock status.

Background

CRA 3 Stock Status

119. A Bmsy reference point has been calculated for CRA 3. The Bmsy calculation is sensitive to the period chosen to represent mean recruitment, which varies substantially over the period for which estimates are available; this causes uncertainty in Bmsy. The NRLMG and MFish Plenary therefore consider this Bmsy estimate unreliable as a target stock size for the fishery.
120. The current Bref for CRA 3 is the stock size associated with a standardised autumn-winter CPUE of 0.75 kg/potlift. This target level was selected for the fishery as it represented a desirable and economically sustainable catch rate for the commercial fishery. It was also recognised to be beneficial to non-commercial fishery participants as it represented a larger stock size than the Bref used previously. Bmin is the lowest stock size in the history of the fishery as estimated by the stock assessment model, and reflecting the current management framework.
121. The CRA 3 stock assessment was updated in 2008. The assessment incorporated best available relevant information including new growth rate information, and updated commercial CPUE and length-frequency information to the end of the 2007-08 fishing year. An important feature of the new stock assessment is that it incorporates a "regime shift" in growth. Analysis of growth rate information from two CRA 3 research data sets showed that a change in growth rates has occurred over time: one dataset encompasses 1975-81 and the other 1996-2006. Growth rates are slower in the latter dataset.

122. The stock assessment results indicate that current stock size is just above Bmin and well below Bref. Under current catches and recent recruitments the assessment model predicts a 75% probability that stock size will decline over the next four years.
123. For a detailed description of the CRA 3 stock assessment, refer to the MFish Rock Lobster Plenary Report (attached to the NRLMG 2008 Annual Report as Annex 2)

CRA 3 Harvest Strategy

124. No management procedure (including harvest control rule) is specified or operating for the CRA 3 fishery at this time. The current CRA 3 harvest strategy is therefore guided by the 1996 Act and the stated NRLMG management goal for rock lobster fisheries, which is to maintain the stock at or above the assessed and agreed biological reference points (targets), using a comprehensive approach that recognises a range of customary Maori, amateur, commercial and environmental values and concerns.
125. When assessing management strategies to achieve this outcome, the NRLMG's key requirement is that the strategies allow the population to increase in each fishing year that the stock is below the target stock level; or be maintained at or above the target level.
126. Periodic stock assessments are undertaken to monitor the health of the CRA 3 fishery. In 2004, a CRA 3 stock assessment concluded that the CRA 3 stock was below the target stock level, Bref. On NRLMG advice, the Minister implemented TAC and TACC decreases (30% and 42% respectively) to increase stock size back towards Bref.
127. The CRA 3 stock assessment was updated in 2008. As set out above, the assessment indicates that current CRA 3 stock size is still well below Bref.

Initial Advice Options

128. The NRLMG's initial advice proposed four options for TAC and allowance setting for CRA 3. These options are described below.

Option 1 – Maintain the current TAC and allowances for CRA 3 (Status Quo)

129. Under Option 1, the current CRA 3 TAC and allowances would be retained for the 2009-10 fishing year (refer Table 2). A CRA 3 Management Procedure would be developed in 2009. The procedure would be designed to restore the fishery to an agreed specified target and would be used to guide statutory TAC setting for CRA 3 from the 1 April 2010.

Option 2 – Reduce the CRA 3 TAC by 8% and adjust only the TACC

130. Under Option 2, the TAC for CRA 3 would be reduced from 319 tonnes to 293 tonnes from 1 April 2009. To achieve this new TAC, the TACC would be reduced from 190 to 164 tonnes. The allowances for customary Maori, recreational, and other fishing mortality would remain unchanged. As with Option 1, a CRA 3 Management Procedure would be developed in 2009 and used to guide statutory TAC setting for CRA 3 from the 1 April 2010.

Option 3A – Reduce the CRA 3 TAC by 19% and adjust only the TACC

131. Under Option 3A, the TAC for CRA 3 would be reduced from 319 tonnes to 257 tonnes from 1 April 2009. To achieve this new TAC, the TACC would be reduced from 190 tonnes to 128 tonnes. The allowances for customary Maori, recreational, and other fishing mortality would remain unchanged. As with Option 1, a CRA 3 Management Procedure would be developed in 2009 and used to guide statutory TAC setting from the 1 April 2010.

Option 3B – Reduce the CRA 3 TAC by 19% and adjust the TACC and the recreational allowance

132. Under Option 3B, the CRA 3 TAC would be reduced from 319 tonnes to 257 tonnes from 1 April 2009 (as proposed under Option 3A). To achieve this new TAC, the TACC would be reduced from 190 tonnes to 134 tonnes and the recreational allowance would be reduced from 20 tonnes to 14 tonnes. The allowances for customary Maori and other fishing mortality would remain unchanged. As with Option 1, a CRA 3 Management Procedure would be developed in 2009 and used to guide statutory TAC setting for CRA 3 from the 1 April 2010.

Summary of Submissions on CRA 3

133. Submissions on proposed TAC and allocation options for CRA 3 were received from: Te Ohu, NPSL, RFC, CRA 3 Recreational, HG-BOP Forum, Mr Kennedy, NZ RLIC, and TEC. Full copies of the submissions are provided in *Attachment 3*.
134. None of the submitters supported Option 1 – Maintain the current TAC and allowances. All submitters agreed that the best available information on CRA 3 showed a stock that was below target levels.
135. NZ RLIC (along with the Tairawhiti Rock Lobster Industry Association (Tairawhiti Association)) state, however, that the CRA 3 stock assessment used to guide management options is now one season out of date. They note that commercial autumn/winter CPUE is a performance indicator for the stock and report that the 2008-09 autumn/winter CPUE increased 15% from the previous season to within 10% of the autumn/winter CPUE equivalent of the target stock size, Bref. They consider this is evidence that the stock assessment projections, which indicate low probability the CPUE target will be achieved by 2012, are highly uncertain.
136. NZ RLIC and Tairawhiti Association therefore propose an alternative TAC and allowance setting option. NZ RLIC and Tairawhiti Association recommend that the TAC and TACC be decreased by 13 tonnes (half the amount proposed under initial advice Option 2). They support development of a management procedure in 2009 to guide TAC setting from 2010.
137. NZ RLIC and Tairawhiti Association note also that the economic cost of the proposed TACC reductions has increased as export demand for quality rock lobsters has strengthened, with the 26 tonnes proposed under initial advice Option 2 now having a value of over \$2.1 million.
138. NZ RLIC and Tairawhiti Association also express concern about the lack of auditing, monitoring and meaningful constraint on non-commercial catches. NZ RLIC and Tairawhiti Association consider this undermines the certainty of any rebuild strategy as non commercial fishing effort may quietly 'soak up' catch foregone by commercial that was intended to accrue to the standing stock.
139. RFC, CRA 3 Recreational, HG-BOP Forum, TEC and Mr Kennedy (all with interests relating to amateur fishing) all support option 3A – Reduce the CRA 3 TAC by 19% and adjust the TACC only.
140. RFC state that it is important that this high value fishery is well managed. RFC suggest that information has shown decreasing abundance for years and no action has been taken, and that the amateur sector is being denied access to a reasonable daily bag limit. RFC considers even Option 3A may not provide sufficient reduction in catches given the variability of catches over the last six years.
141. The RFC opposes any move to reduce the amateur take where the amateur take is less than the commercial take, as is the case in CRA 3.

142. CRA 3 Recreational and the HG-BOP Forum consider that low recruitment, reduced growth rates and the concession are making it extremely difficult for amateurs to catch a legal size rock lobster in CRA 3. They feel that the larger catch limit reduction provided by Option 3A is therefore in the best interests of both the commercial sector and the amateur sector as it will benefit the fishery as a whole.
143. TEC believes a precautionary approach to overall management of the CRA 3 fishery should be adopted because of the uncertainty in stock status information, and the differing anecdotal evidence available.
144. Te Ohu and NPSL support Option 3B – Reduce the CRA 3 TAC by 19% and adjust the TACC and the recreational allowance. NPSL consider it is in the long term interests of Ngati Porou, NPSL and Maori fishing to take a larger cut to the TAC now to ensure future gains in the fishery. NPSL promote sharing the pain of the cut – Option 3B – as they believe amateur responsibility is inadequate and that reporting and information by amateur fishers is critical to future management of the fishery.
145. Te Ohu support the TAC proposed under Options 3A and 3B as it provides the higher probability (89%) that stocks will increase over a four-year timeframe. Te Ohu also support promote sharing the pain of the cut – Option 3B – between amateur and commercial. If amateur are unwilling to share the pain of the cut, Te Ohu recommend an alternative TAC and allowance setting option, whereby the TAC is reduced to a level that provides a 70% probability of the fishery rebuilding over the next four years.
146. Both Te Ohu and NPSL give support to the development of a management procedure to guide TAC setting from 2010. Te Ohu notes that iwi need to be involved in the development of any management procedure. Te Ohu notes also that a management procedure cannot be the sole driver in TAC setting decisions however.
147. Mr Kennedy considers that until such time as we have proof that numbers of lobsters within the three CRA 3 statistical areas are steady or increasing, catch limits should be set to the lowest or worst-case scenario based on the best available information. Consequently, the NRLMG have assumed Mr Kennedy supports the TAC cut proposed in Options 3A and 3B, but are unsure of his preferred allocation option.
148. The NRLMG notes that Te Ohu, NPSL, RFC, NZ RLIC and Tairawhiti Association suggest other, contingent, or additional management interventions that are outside the scope of this advice process. These are set out in the 'Other Matters' section towards the end of this document.

NRLMG Discussion on Relevant Matters Raised in Submissions

149. NZ RLIC and Tairawhiti Association report that the 2008-09 autumn/winter CPUE increased 15% from the previous season to within 10% of the autumn/winter CPUE associated with the target stock size, Bref. The NRLMG confirms this information is correct.
150. NZ RLIC and Tairawhiti Association consider this evidence that the stock assessment projections are highly uncertain; they use this as a basis to propose an alternative TAC and allowance setting option. The NRLMG acknowledges the stock assessment projections are highly uncertain. The NRLMG does not support the alternative allocation option suggested by NZ RLIC and Tairawhiti Association. It considers the 2008 stock assessment results remain the best available information on which to base TAC setting at this time.
151. The NRLMG acknowledges the new information provided by NZ RLIC on export value and has used this new information in the assessments of costs and benefits set out below.

152. The NRLMG also acknowledges the concerns raised by NZ RLIC and Tairawhiti Association regarding the risk that catch foregone by commercial and intended to accrue to the standing stock will be instead soaked up by unmonitored and unconstrained non-commercial harvesting. The NRLMG notes that, in general, non-commercial catch rates will fluctuate with fluctuating abundance and therefore non-commercial catch levels will have been affected by declining abundance and will improve as abundance improves. The NRLMG, notes however, that it does not have quantitative information on total amateur and total customary catches and therefore cannot draw any conclusions about whether increased catching success by amateur and customary stakeholders would increase total harvest beyond that allowed for in the TAC.
153. RFC suggest that information has shown decreasing abundance for years and no action has been taken, and that the amateur sector is being denied access to a reasonable daily bag limit. The NRLMG disagrees with this summation. CRA 3 commercial stakeholders implemented a voluntary commercial catch limit reduction of 40% in April 2004 in response to declining commercial catch rates. Information that the CRA 3 stock had fallen below the target stock level, Bref, became available to the NRLMG in mid-2004. The NRLMG recommended significant catch decreases (30% decrease to the TAC and a 42% decrease to the TACC), which were implemented on 1 April 2005. Subsequent fishery information indicated the declining trend in abundance had been halted, and stock size increased slightly and then levelled off. The NRLMG requested an updated stock assessment in 2008 to inform ongoing management of the fishery.
154. The NRLMG does not have specific information on the catching success of amateur fishers but notes that commercial fishery catch rates for CRA 3 are less than those experienced in the late 1990s-early 2000s due to declining abundance with the standardised annual CPUE of commercial CRA 3 fishers declining from 2.69 kg/potlift to 0.59 kg/potlift between 1997-98 and 2005-06. The NRLMG notes that the stock assessment uses the commercial CPUE as an index of the abundance of the population available to all uses of the fishery. Anecdotal information from customary and amateur fishing representatives confirms that non-commercial fishers likely experienced catch-rate declines of a similar magnitude.
155. The RFC notes catch variability over the last six years and ask, in particular, what changed in the fishery between 2004/05 when 50% of the TACC was caught and 2005/06 when 90% was caught? The NRLMG notes that CRA 3 commercial fishers voluntarily shelved quota in the 2004-05 fishing year; a statutory cut of 42% was made to the TACC in 2005-06.
156. CRA 3 Recreational, the HG-BOP Forum, Mr Kennedy and TEC (and also Te Ohu and NPSL) advocate a precautionary approach to overall management of the CRA 3 fishery. In principle, NRLMG agrees. However, when considering the way and rate of rebuild of a fishstock, the 1996 Act requires the Minister to have regard to relevant social, cultural, and economic factors. The NRLMG considers the relevant factors to include:
- i. the economic cost and benefits, social factors and rate of adjustment to the fishing industry
 - ii. the availability of rock lobster to Maori and amateur fishing groups
 - iii. the economic return from the fishery
 - iv. the uncertainty in the assessment of stock size and other biological parameters
 - v. the risk to the population, and
 - vi. the timeframe over which the management options will have effect.

157. In recent advice documents, MFish similarly notes “such considerations may include the potential impacts of decisions on the social, cultural and economic values of tangata whenua and stakeholders, including commercial and non-commercial fishers, and extractive users”.
158. Te Ohu and NPSL (and also NZ RLIC and Tairawhiti Association) feel that improved information from amateur fishers is critical to the future management of the fishery. The NRLMG concurs with this position but notes little agreement currently exists among sector groups on what and how information should be collected. The NRLMG will continue to support discussion and progress on this issue at both the national and regional levels.
159. Te Ohu suggest that, if amateur are unwilling to share the pain of the large cut, then an alternative TAC and allowance setting option that provides a 70% probability of the fishery rebuilding over the next four years should be adopted. The NRLMG considers the options provided in the NRLMG’s initial advice provide sufficient range of choice for weighing and weighting risks, costs and benefits.
160. Te Ohu notes that the proposed management procedure for CRA 3 should not be the sole driver of TAC setting decisions. The NRLMG notes the Minister of Fisheries always has discretion not to implement the outcome of a management procedure and to request alternative advice. The NRLMG considers it is desirable, however, for fishery participants to have clear objectives and to build key considerations into the management procedure in order to provide certainty to fishery participants and certainty of outcomes.

Assessment of Management Options for CRA 3

161. Assessment of the management options against statutory criteria is set out at the end of this Final Advice Paper. Key considerations and impacts are discussed below.

Sustainability

162. Best available information indicates the CRA 3 stock is below target size.
163. Variable information exists on the trend in abundance (ie, whether stock size is decreasing or increasing):
 - a) the 2008 stock assessment results suggest a stock that has been static (neither increasing or decreasing) in recent years and that is likely (with 75% probability) to decrease in size over the next four years under current catch levels; and
 - b) standardised autumn/winter CPUE information (which is considered to be an index of relative abundance in the fishery) suggests a stock that reached a recent minimum of 0.46 kg/potlift in 2002/03 and which has since gradually increased to 0.68 kg/potlift in 2008/09, which is 90% of Bref (0.75 kg/potlift).
164. The NRLMG acknowledges that CRA 3 fishery information is uncertain and that stock assessment projections in particular are highly uncertain and sensitive to the period chosen from which to estimate future recruitment. The recent standardised autumn/winter CPUE information may be interpreted as giving credence to the commercial sector belief that the projections of the 2008 stock assessment are overly pessimistic. The NRLMG notes, however, that this new information is preliminary, has not been considered by the Rock Lobster Fisheries Assessment Working Group (RLFAWG), and is not inconsistent with the 2008 stock assessment projections because there is uncertainty associated with the measurement of abundance using CPUE and the prediction is for a downward trend over the five year period following the final year in the 2008 stock assessment; the first year of the prediction will be close to the final year of the assessment and may even be higher.

165. The stock assessment is considered robust by the RLFAWG and MFish Plenary, and represents the best information currently available on the status of the CRA 3 fishery to inform TAC setting options at this time. The recent CPUE information is acknowledged by the NRLMG but the information does not contradict or supersede the 2008 stock assessment. The recent information may contribute to the assessment of the short-term (1 year) risk associated with each of the TAC options presented.

Status quo option

166. The NRLMG does not consider the status quo (retaining the existing TAC and allowances) is consistent with its stated management approach.
167. The 2008 stock assessment indicates status quo catch levels would likely (with 75% probability if applied for four years) reduce the stock size, which is already below the target level. The NRLMG notes the information is uncertain and the risk of a decrease in stock size may be overstated. However, submitters on the NRLMG initial advice paper rejected initial advice Option 1 – Retain the existing CRA 3 TAC and allowances. Even though it is highly probable the TAC would remain for only one year (because a management procedure would be developed in 2009 and used to guide TAC setting from 2010), NRLMG members and submitters appeared to consider a reduction in catches was required to advance a rebuild of the fishery.
168. The NRLMG therefore does not consider the status quo to be a credible management option and does not present it to you for final consideration.

Options A, B and C

169. The remaining options are summarised in the following table:

| | |
|----------|---|
| OPTION A | (i) Decrease the TAC from 319 tonnes to 293 tonnes; <i>And, to achieve the decrease,</i> (ii) Decrease the TACC only from 190 tonnes to 164 tonnes. |
| OPTION B | (i) Decrease the TAC from 319 tonnes to 257 tonnes; <i>And, to achieve the decrease,</i> (ii) Decrease the TACC only from 190 tonnes to 128 tonnes. |
| OPTION C | (i) Decrease the TAC from 319 tonnes to 257 tonnes; <i>And, to achieve the decrease,</i> (ii) Decrease the TACC from 190 tonnes to 134 tonnes; <i>and</i> (iii) Decrease the recreational allowance from 20 tonnes to 14 tonnes. |

170. **Note:** It is proposed that, irrespective of the option chosen for CRA 3 this year, a management procedure will be developed during 2009 for this stock for your consideration, which, if adopted, will guide TAC setting from 1 April 2010.
171. Each of the options is consistent with the NRLMG management approach over the long-term, although each has different attendant risks, costs and benefits in the short-term.
172. None of the options is likely to pose a significant short-term risk to sustainability of the fishery. This is because, as noted above:
- a) standardised autumn/winter CPUE information (which is an index of relative abundance in the fishery) suggests a stock that reached a recent minimum of 0.46 kg/potlift in 2002/03 and which has since gradually increased to 0.68 kg/potlift in 2008/09, which is 90% of Bref (0.75 kg/potlift); and

- b) the TAC options presented are only intended to apply for one year (2009-10). In 2009 a management procedure will be developed to guide TAC setting from 1 April 2010. A key aim of the management procedure will be to achieve and maintain target stock size with high certainty.

173. If the proposed TACs continued to apply in the long-term (ie, if a management procedure was not adopted and applied from 1 April 2010), then Option A is considered to pose a higher sustainability risk to the fishery than Options B or C. The 2008 stock assessment results suggest the TAC proposed under Option A provides 50% likelihood that stock size will increase if the TAC were applied for four years, whereas the proposed TAC under Options B and C provides 89% likelihood that stock size would increase if the TAC were applied for four years.

Way and Rate of Rebuild

174. When considering varying a TAC to achieve rebuild of a fishstock, the 1996 Act requires you to have regard to relevant social, cultural, and economic factors. The NRLMG considers the relevant factors to include:
- i. the risk to the stock population
 - ii. the uncertainty in the assessment of stock size and other biological parameters
 - iii. the timeframe over which the management options will have effect.
 - iv. the availability of rock lobster to Maori and amateur fishing groups
 - v. the economic cost and benefits, social factors and rate of adjustment to the fishing industry
 - vi. the economic return from the fishery
175. In recent advice documents, MFish similarly notes that “such considerations may include the potential impacts of decisions on the social, cultural and economic values of tangata whenua and stakeholders, including commercial and non-commercial fishers, and extractive users”.

Risk to the stock population and uncertainty in information

176. As noted, none of the options is likely to pose a significant short-term (1 year) risk to sustainability of the fishery. This is because your TAC decision is only intended to apply for one fishing year (2009-10).
177. If the TACs were applied for a longer than the one year proposed, then Option A is considered to pose a higher sustainability risk to the fishery than Options B or C because Option B and C have higher probability of increasing stock size over a four year period.

Availability of rock lobster to customary Maori and amateur fishers

178. Customary Maori and amateur fishing interests have expressed concern about a lack of availability of rock lobster. Amateur fishers have expressed particular concern about a lack of legal size lobster in the nearshore waters around Gisborne (in statistical area 910).
179. In general, catching success for all sectors declines with declining abundance. Fishery information shows the standardised annual CPUE of commercial CRA 3 fishers declined from 2.69 kg/potlift to 0.59 kg/potlift between 1997-98 and 2005-06. The NRLMG notes that the stock assessment uses the commercial CPUE as an index of the abundance of the population available to all uses of the fishery. There is no similar information available on catch rates for

non-commercial fishers but anecdotal information suggests non-commercial fisher catch rates have also declined markedly over this period.

180. Option B is most likely to increase non-commercial catching success in the short term and Option A is least likely to increase non-commercial catching success in the short term.
181. The scarcity of information on total amateur and customary catch means the NRLMG cannot draw any conclusions about whether amateur or customary catches are below, at or above the allowances provided for in the TAC and therefore whether a possible increase in catching success by non-commercial fishers might result in re-allocation of catch from commercial to non-commercial stakeholders.

Impact on cultural, social and economic values of customary Maori and amateur fishers

182. Although not quantifiable, the NRLMG recognises that CRA 3 rock lobsters are of significant non-commercial value: rock lobster (or koura) is taonga to local tangata whenua, is highly sought after by amateur fishers in the region and is a drawcard for domestic and international visitors to the region.
183. In general terms, the relative impact of the options presented on non-commercial impacts is commensurate with the likely increases to lobster availability – Option B having the most positive impact and Option A having the least positive impact. This is because a larger cut in commercial catch (without commensurate cuts in non-commercial catches) implies greater emphasis is being placed on social, cultural and economic values of non-commercial fishers.
184. Option C proposes a pro-rating the proposed TAC cut across the TACC and recreational allowance. The NRLMG is not proposing any measures to reduce amateur harvesting capability. The scarcity of information on total amateur catch means the NRLMG cannot draw any conclusions about whether amateur catch is currently below, at or above the existing 20 tonne recreational allowance. It is therefore not known if the six tonne reduction in the recreational allowance proposed under Option C would require a reduction in harvesting capability (eg, a bag limit reduction) in order to constrain catches to the allowance.
185. Submissions and anecdotal information suggest amateur fishers do not consider a reduction in the allowance to be a credible option. Though the decrease would not act to constrain amateur fishing, amateur fishers are likely to interpret the reduction as evidence of a lack of recognition of their cultural, social and economic fishing values. The NRLMG therefore considers Option C will have a high perceived impact from the point of view of amateur fishers.
186. The NRLMG acknowledges that other stakeholders perceive this differently. Te Ohu, NPSL, and NZ RLIC all noted in their submissions that a recreational allowance cut would not directly constrain amateur fishers but would demonstrate “responsibility” and a commitment on the part of amateur fishers to share in the job of managing the fishery sustainably.

Impact on commercial stakeholders, including costs and rate of adjustment

187. All three options result in costs to commercial stakeholders. These costs can be quantified in terms of the single year, dollar value of the foregone catch. The following table shows the value of the foregone catch using 2007 export prices and also more recent spring/summer beach prices:

| Option | Proposed Reduction in TACC | Estimated Value (based on 2007 average export prices) | Estimated Value (based on 2008-09 spring/summer beach price) | Percentage value loss (loss in value/ total commercial value) |
|--------|----------------------------|--|---|--|
| A | 26 tonnes | \$1.1 million | \$2.1million | 14% |
| B | 62 tonnes | \$2.5 million | \$5.0 million | 33% |
| C | 56 tonnes | \$2.2 million | \$4.5 million | 29% |

188. This is the direct loss of income to commercial stakeholders and to the Gisborne/East Coast community. NZRLIC and Tairawhiti Association indicate there may also be an indirect impact on ACE prices. They note that, in situations where the TACC constrains commercial catches, ACE prices are high; the greater the constraint the greater the competition between fishers for available ACE. This is particularly the case in the relatively small CRA 3 fishery where predominantly ACE dependent must retain a three-tonne minimum ACE holding in order to participate in the fishery. This indirect cost cannot be quantified at this time.
189. Variations to TACCs require adjustments within the industry, for example changes to how ACE is acquired or distributed or how a fishing fleet is operated in order to maintain economic viability. A faster rate of adjustment is required to deal with a large cut than for a small cut. Consequently, the rate of adjustment required for Option A is slower than for Option B (which has the fastest required rate of adjustment) and Option C.

Allocation

190. Options A and B achieve the proposed TAC decreases by decreasing the TACC and maintaining existing non-commercial allowances. Decreasing the TACC only provides the greatest certainty that the desired catch reductions will be achieved.
191. NZ RLIC and Tairawhiti Association express concern that non-commercial fishing effort may quietly 'soak up' catch foregone by commercial that was intended to accrue to the standing stock. The scarcity of information on total amateur and customary catch means the NRLMG cannot draw any conclusions about whether amateur or customary catches are below, at or above the allowances provided for in the TAC and therefore whether a possible increased in catching success by non-commercial fishers might reduce the reduction of catch achieved in real terms.
192. Option C proposes the same TAC as Option B but proposes pro-rating the cut across the TACC and recreational allowance. The NRLMG is not proposing any measures to reduce amateur harvesting capability. As noted, the scarcity of information on total amateur catch means the NRLMG cannot draw any conclusions about whether amateur catch is currently below, at or above the existing 20 tonne recreational allowance. It is therefore not known if the six tonne reduction in the recreational allowance proposed under Option C would require a reduction in harvesting capability (eg, a bag limit reduction) in order to constrain catches to the allowance.
193. MFish notes that, as no information is available to confirm total amateur catch and no mechanism is proposed to actively reduce total amateur catch, this option may not be credible or effective at achieving the desired reduction in total catch.
194. The NRLMG notes that both stock assessments and the setting of TACs and allowances take into account the differing size limits that apply to each sector. The NRLMG also notes that all fishing sectors in CRA 3 have been affected by declining stock size and there is no information available to assess whether one sector has been more affected than another.

Conclusion

195. The following table summarises relevant costs and benefits for you to consider in making your decision:

| | Option A | Option B | Option C |
|---|--|--|---|
| Proposed Changes | TAC - 26t TACC - 26t | TAC - 62t TACC - 62t | TAC: - 62t TACC: - 56t Recreational Allowance: - 6t |
| Risk to stock population | Low | Low | Low |
| Probability that cut, if applied constantly, would increase stock size by 2011-12 | ~50% | ~89% | <~89% |
| Timeframe of effect | 1 year (Management procedure applied from 2010) | 1 year (Management procedure applied from 2010) | 1 year (Management procedure applied from 2010) |
| Availability of lobster to customary Maori and recreational | Least benefit to non-commercial availability | Most benefit to non-commercial availability | Median benefit to non-commercial availability |
| Impact on non commercial cultural, social, and economic values | Least benefit to perceived non-commercial values | Most benefit to perceived non-commercial value | High perceived impact on non-commercial value |
| Economic impact on commercial stakeholders | Lowest commercial cost (14% loss in value) | Highest commercial cost (33% loss in value) | High commercial cost (29%) |
| Rate of adjustment required by commercial | Slowest | Fastest | Fast |

196. There is no agreement within the NRLMG on a recommended position.

197. The NRLMG notes that:

- a) All options are consistent with the requirement of s 13 of the 1996 Act to set a TAC that moves the stock towards the target level.

Information is uncertain but Options B and C are more likely to result in an increase in stock size over a four year time period than Option A. However, it is intended that the proposed TACs apply for one year only. Irrespective of the option chosen for CRA 3 this year, a management procedure will be developed during 2009 for this stock for your consideration, which, if adopted, will guide TAC setting from 1 April 2010. A key aim of the management procedure will be to achieve and maintain target stock size with a high degree of certainty.

- b) When deciding the appropriate way and rate of rebuild of a stock that is below the target level, the 1996 Act requires you to have regard to such social, cultural, and economic factors you consider relevant. The NRLMG notes, in terms of this one year TAC:

- i. Option A is the appropriate choice if you consider minimising the cost to, and the rate of adjustment required by, commercial sector stakeholders in the short-term (1 year) to be of primary concern; and
 - ii. Option B is the appropriate choice if you consider maximising the benefits accruing to non-commercial social, cultural, and economic fishing values, including fish availability, in the short-term (1 year) to be of primary concern.
- c) When setting or varying a TACC, you are required to allow for non-commercial Māori and amateur fishing interests, and other fishing mortality. The NRLMG notes:
- i. None of the options act to constrain non-commercial fishing effort
 - ii. Option C, which proposes a six tonne decrease in the recreational allowance, is the only option to reduce a non-commercial allowance. Option C is the appropriate choice if you consider a large cut to the TAC is needed and the pain of the cut should be shared, at least between commercial and amateur fishers. MFish notes that, as no information is available to confirm total amateur catch and no mechanism is proposed to actively reduce total amateur catch, this option may not be credible or effective at achieving the desired reduction in total catch.

Recommendation

198. The NRLMG recommends that you:

EITHER

- i. **decrease** the CRA 3 TAC from 319 tonnes to 293 tonnes;
And, to achieve the decrease,
- ii. **decrease** the CRA 3 TACC only from 190 tonnes to 164 tonnes.

OR

- iii. **decrease** the CRA 3 TAC from 319 tonnes to 257 tonnes;
And, to achieve the decrease,
- iv. **decrease** the CRA 3 TACC only from 190 tonnes to 128 tonnes.

OR

- v. **decrease** the CRA 3 TAC from 319 tonnes to 257 tonnes;
And, to achieve the decrease,
- vi. **decrease** the CRA 3 TACC only from 190 tonnes to 134 tonnes;
And
- vii. **decrease** the CRA 3 recreational allowance from 20 tonnes to 14 tonnes.

Note: It is proposed that, irrespective of the option chosen for CRA 3 this year, a management procedure will be developed during 2009 for this stock for your consideration, which, if adopted, will guide TAC setting from 1 April 2010.

CRA 4 (WELLINGTON/HAWKE BAY ROCK LOBSTER FISHERY)

Final Proposal

The NRLMG recommends that you be guided by the CRA 4 Management Procedure and agree to:

- (i) **decrease** the CRA 4 TAC from 771 tonnes to 460 tonnes;
And, to achieve the decrease,
- (ii) **decrease** the CRA 4 TACC only from 577 tonnes to 266 tonnes.

Background

CRA 4 Stock Status

- 199. Best available information indicates the current CRA 4 stock size may be below the target level.
- 200. No reliable estimate of Bmsy is currently available for CRA 4. The MFish Plenary has agreed a proxy target, Bref, which is the autumn-winter vulnerable stock size associated with the period 1979-88. 1979-88 was a period when the CRA 4 stock showed good productivity and was demonstrably safe: it subsequently declined to lower levels and then recovered. Bmin for CRA 4 is defined as the autumn-winter vulnerable stock size associated with the lowest observed abundance in the CRA 4 fishery.
- 201. No new stock assessment has been conducted in 2008 so information on current stock size is uncertain:
 - a) the 2005 stock assessment indicated stock abundance was well above the Bmin and Bref. The median expectation was that stock size would decline slightly over the subsequent three years but would remain above Bref. Uncertainty around these median predictions was very high
 - b) commercial CPUE is considered a reliable indicator of relative abundance in CRA 4; seasonal CPUE information suggests current stock size is probably above Bmin but below Bref.
 - c) CRA 4 commercial stakeholders did not harvest the full TACC in 2004-05, 2005-06 or 2006-07 and voluntarily shelved ACE in 2007-08 and 2008-09. Given the decline in CPUE over the same period, the NRLMG considers that the TAC is not sustainable.
- 202. The NRLMG considers it highly likely that the current TAC is unsustainable and that if the full TACC were to be taken in the 2009-10 fishing year stock size in CRA 4 would decline.

Initial Advice Options

- 203. Initial Advice Paper 1 proposed adopting a CRA 4 Management Procedure to guide TAC setting in CRA 4 for the next three years. Simulation testing of the management procedure using a model of the CRA 4 fishery suggests, if applied, the procedure would result in a CRA 4 stock size that:
 - a) remains above Bref with greater than 90% probability; and
 - b) remains above Bmin with greater than 99% probability; and
 - c) is, on average, larger than Bref.

204. In Initial Advice Paper 2, the NRLMG proposed two options for TAC and allowances setting for CRA 4. These options were:

Option 1 – Vary the CRA 4 TAC & TACC using the CRA 4 Management Procedure

205. Under Option 1, the TAC for CRA 4 would be reduced from 771 tonnes to 460 tonnes, and the TACC would be reduced from 577 tonnes to 266 tonnes, from 1 April 2009. The allowances set for customary Maori, amateur and other fishing mortality would remain unchanged.
206. The proposed variations resulted from operation of the proposed CRA 4 Management Procedure. The operation of the CRA 4 Management Procedure represents the best available information to guide TAC setting for CRA 4 fishery in 2009-10 (refer Final Advice Paper 1).

Option 2 – Maintain the current CRA 4 TAC and allowances (status quo)

207. Under Option 2, the current CRA 4 TAC and allowances would be retained for the 2009-10 fishing year.
208. Available information suggests the current CRA 4 TAC may be unsustainable but information is uncertain. Consequently, under Option 2 a CRA 4 stock assessment would be completed in 2009 to provide further information on the status of the fishery and to enable assessment of a range of alternative TAC setting options.

Summary of Submissions on CRA 4

209. MFish received submissions on the proposed CRA 4 TAC and TACC variations from Te Ohu, RFC, NZ RLIC, Te Kupenga, NSFC, Mr Beetham, and Mr Muollo. Full copies of the submissions are provided in *Attachment 3*.
210. RFC, NZ RLIC, NSFC, and Mr Beetham all support reducing the CRA 4 TAC and TACC for the 2009-10 fishing year based on the operation of the CRA 4 Management Procedure. RFC, NSFC, and Mr Beetham (all recreational sector stakeholders) express concern about the state of the fishery and note its high value to recreational fishers. NZ RLIC (also writing for the CRA 4 Rock Lobster Industry Association) notes that the CRA 4 Management Procedure represents the best available information to guide TAC setting in CRA 4 for 2009-10 (and beyond).
211. Te Ohu reports that the message from customary Maori interests in CRA 4 is that CRA 4 is in such a poor state they are unable to provide for the needs of marae, hapu and whānau. Some kaitiaki (in particular Ngati Kahungunu kaitiaki) are constraining customary catches as a means of rebuilding rock lobster abundance within their rohe moana. Te Ohu support cutting the commercial catch limit for the 2009-10 fishing year based on the operation of the CRA 4 Management Procedure. However, Te Ohu would prefer that the cut to commercial catch be achieved through voluntary commercial ACE shelving rather than through a cut to the TACC.
212. Te Kupenga does not express support for a specific option but note their support for the CRA 4 Management Procedure and for a 50% reduction in the TACC. (The NRLMG notes applying the CRA 4 Management Procedure results in a 54% reduction to the current CRA 4 TACC for the 2009-10 fishing year.)
213. Mr Muollo - a commercial fisher, processor and exporter operating in statistical area 915 on the Wellington South Coast – supports the status quo. Mr Muollo reports “excellent” catches and catch rates in statistical area 915. Mr Muollo believes the CRA 4 Management Procedure places too much emphasis on catch rates in the Wairarapa statistical areas and does not properly take account of the characteristics of the unique Wellington coast area.

214. Mr Beetham, NSFC, RFC, Te Kupenga, Te Ohu and Mr Muollo all put forward other, contingent or additional management interventions that are outside the scope of this advice process. These are set out in the 'Other Matters' section towards the end of this document.

NRLMG Discussion on Relevant Matters Raised in Submissions

215. Most submitters support the NRLMG preferred option of reducing the CRA 4 TAC and TACC based on the operation of the CRA 4 Management Procedure (initial advice Option 1). In general, these submitters agreed the CRA 4 stock may be below the target level.
216. Te Ohu support the proposed reduction in harvest from the CRA 4 fishery but express a preference for a large portion of the reduction to be achieved through voluntary commercial ACE shelving rather than statutory cuts to the TAC (and TACC). The NRLMG notes that, although information on stock status is uncertain, seasonal CPUE information suggests the current CRA 4 stock size may now be below Bref. A cut to the TAC is therefore desirable to ensure statutory TAC setting obligations under s 13 of the Act are met. Operation of the CRA 4 Management Procedure represents the best available information to guide TAC setting at this time. The NRLMG does not have information to inform alternative TAC setting options that might meet statutory obligations.
217. In addition, NZ RLIC has informed the NRLMG that the CRA 4 Rock Lobster Industry Association supports the proposed TAC and TACC reductions and therefore has not initiated voluntary ACE shelving discussions for the 2009-10 fishing year. NZ RLIC notes there is insufficient time available now to complete a robust voluntary ACE shelving process prior to the beginning of the fishing year.
218. Mr Muollo does not support CRA 4 TAC (or TACC) reductions at this time. Mr Muollo cites excellent recruitment, catches and catch rates in statistical area 915 as evidence reductions are not needed at this time. The NRLMG confirms that catch rates in statistical area 915 are currently higher than other parts of the CRA 4 fishery. Catch rates do differ from area to area within quota management areas because of, among other things, differing habitat types and levels of fishing effort.
219. TACs are set for the whole quota management area and therefore must take into account the status of the fishery as a whole. Stock modelling shows stock size has been declining steadily in CRA 4 since 1999. Seasonal catch and CPUE information suggest the current TAC is unsustainable and stock size is below Bref. Science advisors to the NRLMG note the stock assessments and the CRA 4 Management Procedure incorporate data from across the fishery.

Assessment

220. Assessment of the management options against the full set of statutory considerations is set out at the end of this Final Advice Paper. Key considerations and impacts are also discussed here.

Sustainability

221. Best available information on CRA 4 stock status has been presented. As set out above, the information suggests a stock that has been declining for some time, may now be below the accepted target reference level, Bref, and would probably decline further if the current TACC was caught in full in 2009-10.
222. The stock status information is uncertain and no reliable estimate of Bmsy is available. However, s 13(2A) provides for this situation, specifying that where you consider the current stock level or Bmsy cannot be reliably estimated, you must, among other things, not use absence of or uncertainty in information as a reason for postponing or failing to set a TAC and must set a TAC using the best available information and that is not inconsistent with the objective of maintaining the stock at, or above, or moving the stock towards or above Bmsy.

223. The recommended decrease in TAC is not inconsistent with the objective of moving the stock to a level at or above Bmsy. The CRA 4 Management Procedure represents the only current information available to guide setting of a sustainable CRA 4 TAC at this time. The CRA 4 Management Procedure has been tested and its application is expected to exceed the minimum expected performance in relation to target and limit reference points that has been specified by the NRLMG and accepted by the MFish Plenary.

Way and Rate

224. The CRA 4 Management Procedure is an adaptive procedure using decision rules based on current data derived from the CRA 4 fishery. It does not specify a rebuild timeframe, but adjusts the TAC based on the standardised commercial CPUE which serves as an indicator of current abundance. On average, implementation of the procedure is expected to move the stock towards the target if it falls below, and to maintain it above the target with a high probability.
225. Most CRA 4 tangata whenua and amateur fishing stakeholders are keenly aware of the decline in stock size and fishing opportunities in the fishery. Delaying action, even just for one year, may not be seen as acceptable or credible. The CRA 4 Management Procedure represents the best available information to guide TAC setting in CRA 4 at this time. The NRLMG has no information on which to base alternative TAC setting options.
226. National and regional commercial sector representative organisations also support the scale of catch reductions recommended. CRA 4 quota share owners have voluntarily implemented the CRA 4 Management Procedure for two years to improve economic returns from the fishery.

Allocation

227. The NRLMG recommends achieving the recommended TAC decrease by reducing only the TACC. Reducing only the TACC provides greatest certainty that stock size will increase, as information on catch and catch rates in customary Maori and amateur fisheries is scarce and uncertain (although information on customary catch is improving). NZ RLIC and the CRA 4 Rock Lobster Industry Association support this approach but emphasise the need to ensure catches by other sectors remain within the allowances provided to ensure that TACC cuts do not become a re-allocation of available catch.
228. No customary or recreational sector participants commented on the recommended approach to allocation of the TAC. Te Ohu and Te Kupenga noted voluntary initiatives by kaitiaki of Ngati Kahungungu to reduce customary harvest and NZRFC, NSFC and Mr Beetham noted the voluntary reduced bag limit (from 6 to 4 lobsters per day) implemented by many fishing clubs located in CRA 4.

Economic Impact

229. Using 2007 export information, the value of 311 tonnes of rock lobster (ie, the recommended reduction to the TACC) is approximately \$12.6 million. However, the NRLMG notes that the voluntary commercial catch limit applied by the CRA 4 commercial sector for 2008-09 is 240 tonnes. The recommended TACC would therefore potentially result in 26 tonne more rock lobster being landed by commercial stakeholders in 2009-10 than in 2008-09.

Timeframe

230. The NRLMG notes the intention to review the management procedure in three years. The review period provides time for more certain information on stock status to be developed and for fishery participants to engage in further conversation about fishery objectives that might inform a future management procedure.

Recommendation

231. The NRLMG recommends that you be guided by the CRA 4 Management Procedure and agree to:
- i. **decrease** the CRA 4 TAC from 771 tonnes to 460 tonnes;
And, to achieve the decrease,
 - ii. **decrease** the CRA 4 TACC only from 577 tonnes to 266 tonnes.
232. The NRLMG has identified no reason why you should not use the results of the CRA 4 Management Procedure to guide statutory TAC setting decisions.
233. If for any reason you consider the new CRA 4 Management Procedure unsuitable to guide TAC setting in 2009-10, the NRLMG recommends that you:
- i. Retain the existing CRA 4 TAC and allowances.
234. Note, because available information suggests the current CRA 4 TAC may be unsustainable, if you choose to retain the existing CRA 4 TAC and allowances a CRA 4 stock assessment would be completed in 2009 to provide information on the status of the fishery and to assess a range of alternative TAC setting options.

CRA 7 (OTAGO ROCK LOBSTER FISHERY)

Final Proposal

The NRLMG recommends that you be guided by the CRA 7 Management Procedure and agree to:

- (i) **increase** the TAC from 143.88 tonnes to 209 tonnes;
And, to achieve the increase,
- (ii) **increase** the TACC only from 123.88 tonnes to 189 tonnes.

Background

Stock Status

- 235. Best available stock information indicates the current CRA 7 stock size is well above the target level.
- 236. An estimate of the statutory target level, B_{msy} , is available for CRA 7 but is uncertain. The MFish Plenary has previously agreed a proxy target, B_{ref} , which is the annual vulnerable stock size associated with the period 1979-81. B_{ref} represents a larger stock size than the uncertain B_{msy} estimate and therefore is a more conservative target stock size.
- 237. A stock assessment was last performed for CRA 7 in 2006. The 2006 stock assessment results indicated stock size in 2005-06 was approximately 1.7 times B_{ref} . Standardised CPUE is considered to be a reliable indicator of relative stock size in CRA 7 and is the abundance indicator used in the CRA 7 Management Procedure. Standardised CPUE has increased over the last two fishing years, indicating that stock size has increased further (Figure 1).

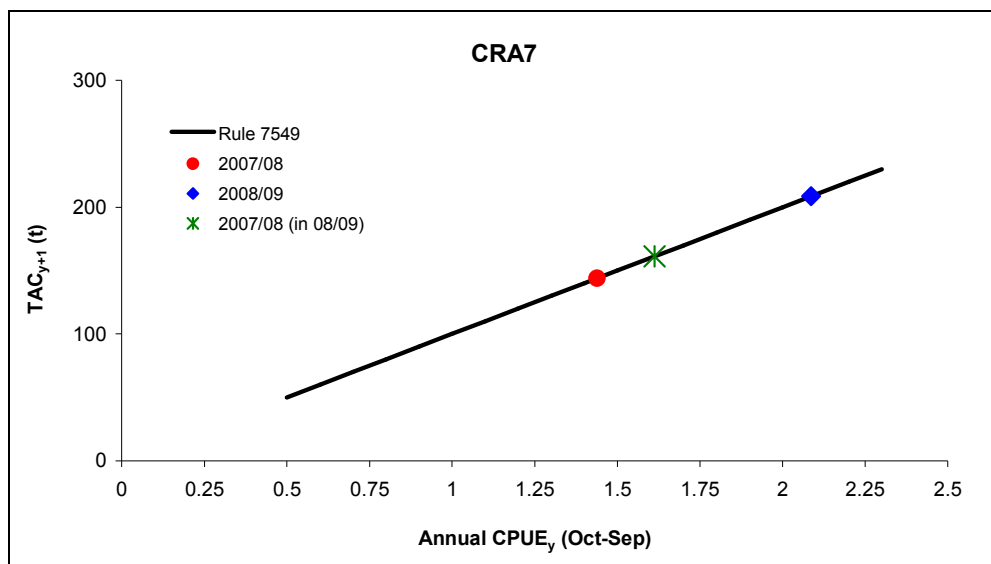


Figure 1: Current (2008-09) CPUE (2.09 kg/pot lift) and 2007-08 CPUE values (one calculated in December 2007 and the most recent calculated at the end of October 2008). Figure 1 also shows a graphical representation of the CRA 7 Management Procedure, showing TAC in the next year as a function of CPUE in the current year.

CRA 7 Management Procedure

238. In March 2008, the previous Minister adopted a CRA 7 Management Procedure to guide TAC setting in the CRA 7 fishery. The procedure is described in detail in *Attachment 2* to this Final Advice Paper.
239. Application of the CRA 7 Management Procedure is expected to deliver a harvest strategy that results in:
- a) an average stock size of 1.5 Bref;
 - b) a stock size that remains above Bref with 80% probability; and
 - c) a stock size that remains above Bmin with 99% probability.

Initial Advice Options

240. The NRLMG operated the CRA 7 Management Procedure for the 2009-10 fishing year beginning 1 April 2009. The NRLMG's initial advice proposed two options for TAC and allowance setting for CRA 7.

Option 1 – Vary the CRA 7 TAC and TACC based on the operation of the CRA 7 Management Procedure

241. Under Option 1, the TAC for CRA 7 would increase from 143.88 tonnes to 209 tonnes from 1 April 2009 as specified by the CRA 7 Management Procedure. To achieve this new TAC, the CRA 7 TACC would be increased from 123.88 tonnes to 189 tonnes. The allowances set for customary Maori, recreational and other fishing mortality would not be changed.

Option 2 – Maintain the current CRA 7 TAC and allowances

242. Under Option 2, the current CRA 7 TAC and allowances would be retained for the 2009-10 fishing year.
243. There is no other information to guide TAC setting options for CRA 7 in the 2009-10 fishing year. Consequently, under Option 2, the management approach to CRA 7 TAC setting would need to be revised.

Summary of Submissions Received on CRA 7

244. MFish received submissions on the proposed TAC and TACC variations for CRA 7 from Te Ohu, Otakou Runanga, ETMC, Mr Flack, RFC, Mr Cross, Mr Parker, Mr Young and NZ RLIC. Full copies of the submissions are provided in *Attachment 3*.
245. Te Ohu, RFC, and NZ RLIC (also writing for the Otago Rock Lobster Industry Council) support Option 1 - set the CRA 7 TAC and TACC based on the operation of the CRA 7 Management Procedure. The basis for their support is a commitment to the ongoing application of the CRA 7 Management Procedure adopted by the previous Minister in March 2008.
246. Mr Cross, a CRA 7 amateur fisher, does not oppose an increase to the TAC. However, he felt some portion of any increase in TAC should be allocated to the recreational allowance and the amateur daily bag limit should be increased from six rock lobsters to 8 rock lobsters.
247. Submissions received from customary Maori fishing interests in CRA 7 (Otakou Runanga, ETMC, and Mr Flack) support Option 2 – maintain the current TAC and allowances for CRA 7. ETMC and Mr Flack feel that any increase to the CRA 7 TAC is premature given the history of fluctuating catches over the last decade. Otakou Runanga requests a precautionary approach when setting

TAC and TACC for CRA 7. It asks that the fishery be allowed several more years to recover from the past impacts of high TAC levels.

248. The submissions from ETMC and Mr Flack also remind MFish the customary allocation is virtually untouched in their rohe moana. They note that takata tiaki use their allocation to conserve the fishery, and any increase given to another sector would nullify this conservative action.
249. Otakou Runanga considers that if the TAC is increased then a non-commercial allowance of 25% of the TAC would recognise the principle that the first priority for the resource is to provide for the needs of the community including both customary and amateur fishers. It is considered by the Runanga that this provision would avoid any risk that commercial and non-commercial users will come into conflict in the foreseeable future.
250. Amateur fishers, Mr Parker and Mr Young, also support Option 2. Mr Parker considers the proposed increase to be far too high. Mr Parker acknowledges there are more fish in the water but doesn't think the TAC should be altered until after the fish have migrated. He also mentions commercial fishers are now targeting larger fish in deeper water and asks what impact this could have on the fishery. Mr Young would like the issue of concession fish to be sorted before any TAC increases are considered.
251. The NRLMG notes ETMC, Otakou Runanga, Mr Flack, RFC, Mr Cross, Mr Parker, Mr Young and the Otago Rock Lobster Industry Association all put forward other or additional management interventions that are outside the scope of this advice process (for example, relating to the commercial concession and to the commercial closed season). These are set out in the '*Other Matters*' section towards the end of this document.

NRLMG Discussion of Relevant Matters Raised in Submissions

TAC Setting

252. Otakou Runanga, ETMC, and Mr Flack feel that any increase to the CRA 7 TAC is premature and ask that the fishery be allowed several more years to recover from the past fluctuations or impacts. The NRLMG notes best available stock information indicates the CRA 7 stock size is well above the target level and has been for several years. The NRLMG considers the existing management approach is cautious because application of the CRA 7 Management Procedure is expected to maintain an average stock size well above the target level.
253. The NRLMG also notes the CRA 7 Management Procedure is responsive to variability in the stock size; if the abundance indicator drops in any year, the TAC will also be reduced in order to maintain abundance at the desired level.
254. Mr Parker doesn't think the TAC should be altered until after the fish have migrated. The NRLMG notes the model of the CRA 7 fishery used in stock assessments and to test the CRA 7 Management Procedure is a multi-stock model and takes into account migration of fish from CRA 7 into CRA 8.
255. Mr Parker wonders what effect commercial fishers targeting larger fish in deeper water are having. The NRLMG notes the CRA 7 Management Procedure evaluations assumed historical fishing patterns which tended to fish for smaller lobsters. However, a new practice of targeting large lobsters in deep water would mean that fewer lobsters would be needed to reach the commercial catch limit. This results in a greater yield per recruit because large lobsters which have nearly ceased growing will be harvested in preference to young fast growing lobsters which would then reach an optimum size. Such a harvest strategy is fully consistent with the CRA 7 Management Procedure objectives of maintaining an average stock size above the target level.

Allocation of the TAC

- 256. The submissions from ETMC and Mr Flack note the customary allocation is virtually untouched in their rohe moana. They note that takata tiaki use their allocation to conserve the fishery, and any increase given to another sector would nullify this conservative action.
- 257. The NRLMG acknowledges the contribution to sustainability reported by takata tiaki. The NRLMG does not consider an increase to the CRA 7 TACC would nullify this conservative action because the CRA 7 Management Procedure is expected to maintain the stock well above the target level (1.5 times), leaving rock lobsters in the water and providing good opportunities for all sectors.
- 258. Otakou Runanga considers that if the TAC is increased then a non-commercial allowance of 25% of the TAC would recognise the principle of first priority to non-commercial fishers and avoid conflicts between commercial and non-commercial users. The Runanga also proposes that 80% of their suggested 25% allowance should be allocated to customary fishing.
- 259. Because information on non-commercial harvest is scarce and unreliable, the NRLMG believes maintaining stock size well above the target level with high certainty represents a more reliable approach to providing for good non-commercial harvest and avoiding inter-sector conflict. The NRLMG notes also that harvest by customary and recreational is not actively constrained to within allowances at this time.
- 260. Mr Cross considers an increase in the TAC should also apply to amateur fishers and that the daily bag limit should also be increased. Amateur representatives to the NRLMG report no widespread view amongst CRA 7 amateur fishers that a bag limit increase is wanted or desirable at this time. The representatives note, however, that increased fishing activity in CRA 7 may have increased amateur catches beyond the current CRA 7 recreational allowance. There is no data to confirm or quantify amateur catch increases at this time, however. In compiling advice, the NRLMG has relied on the catch data provided to and accepted by the MFish Plenary (refer *Table 1*). Any risk associated with underestimating amateur catch is mitigated by:
 - a) the estimated aggregate non-commercial catches being less than half the current aggregate non-commercial allowances
 - b) operation of the management procedures- the abundance indicator in the procedure measures the impact *all* fishing has on abundance and varies the TAC accordingly.

| CRA 7 | Customary | Recreational | Other Fishing Mortality |
|-------------------|-----------|--------------|-------------------------|
| Allowances | 10 tonnes | 5 tonnes | 5 tonnes |
| Estimated Catches | 1 tonne | 4.51 tonnes | 1 tonne |

Table 1: *Current allowances and estimated catches for customary, recreational, and other sources of fishing related mortality.*

Other Relevant Matters

- 261. RFC notes that *Table 5* on page 25 of the initial advice gives the impression that ‘Other Fishing Mortality’ is a result of legitimate non-commercial fishing activity, whereas they consider it to be a shared responsibility. The NRLMG notes it was not their intention to imply a link between

other fishing mortality and legitimate non-commercial fishers. The NRLMG merely wished to present best available information on the other components of the TAC.

Assessment

262. Assessment of the management options against the full set of statutory considerations is set out at the end of this Final Advice paper. Key considerations and impacts are also discussed here.

Sustainability

263. The recommended increase in TAC would not pose a risk to sustainable utilisation. Best available information on the CRA 7 stock status has been presented. As set out above, the best available information suggests a stock that is well above the target stock size. The CRA 7 Management Procedure is responsive to variability in the stock size and is designed to maintain stock size well above B_{ref} with high probability. The procedure is expected to maintain a stock size of 1.5 times B_{ref} and to maintain stock size above B_{min} with over 99% probability.
264. Retaining the current TAC for CRA 7 would likely result in a further increase in stock size.

Utilisation & Value

265. The recommended allocation model would result in a TACC increase only. Using 2007 export information, the commercial value of the recommended 65.12 tonne increase is estimated to be \$2.6 million.
266. Comparative estimates of customary and recreational value are not available but the NRLMG recognises rock lobster is taonga to Maori and is highly sought after by amateur fishers so holds significant non-commercial cultural, social and economic value.
267. Best available information suggests existing customary Maori and recreational allowances are not being caught at this time. The NRLMG notes, however, that the information on customary Maori and amateur harvest is unreliable. The NRLMG considers that maintaining a stock size well above target levels ensures the high value placed on rock lobster by Maori and amateur fishers is recognised and that good fishing opportunities are provided for.
268. Any risk associated with underestimating non-commercial harvest is mitigated by the operation of the management procedure – the CPUE abundance indicator used in the procedure measures the impact *all* fishing has on abundance and varies the TAC accordingly.
269. Retaining the current TAC and allowances for CRA 7 would likely result in increased catch rates in the CRA 7 non-commercial fisheries.

Credibility

270. The NRLMG believes that choosing not to implement the results of an agreed management procedure without an explicit reason would also reduce stakeholder confidence in the application of management procedures. Such a decision may also affect development and implementation of management procedures for other fisheries in New Zealand.

Recommendation

271. The NRLMG recommends that you be guided by the CRA 7 Management Procedure and agree to:
- i. **increase** the CRA 7 TAC from 143.88 tonnes to 209 tonnes;
And, to achieve the increase,
 - ii. **increase** the CRA 7 TACC only from 123.88 tonnes to 189 tonnes.
272. The NRLMG has identified no reason why you should not use the results of the CRA 7 Management Procedure to guide statutory TAC setting decisions.
273. If for any reason you consider the CRA 7 Management Procedure unsuitable to guide TAC setting in 2009-10, the NRLMG recommends that you:
- i. Retain the existing CRA 7 TAC and allowances.
274. Note, if you choose this option, a new management approach would need to be developed and adopted for the CRA 7 fishery.

CRA 8 (SOUTHERN ROCK LOBSTER FISHERY)

Final Proposal

The NRLMG recommends that you be guided by the CRA 8 Management Procedure and agree to:

- (i) **increase** the TAC from 1053 tonnes to 1110 tonnes;
And, to achieve the increase,
- (ii) **increase** the TACC from 966 tonnes to 1019 tonnes; *and*
- (iii) **increase** the recreational allowance from 29 tonnes to 33 tonnes.

275. This option was not presented in the IPP. The NRLMG initial advice preferred option was to increase the CRA 8 TAC as stated but to achieve the increase by adjusting the TACC only. Based on information provided in submissions, the NRLMG agrees it is more constructive to achieve the increase by increasing both the TACC and the recreational allowance.

Background

CRA 8 Stock Status

276. Best available information indicates the current CRA 8 stock size is well above the target level.
277. An estimate of Bmsy is available for CRA 8 but is uncertain. A proxy target, Bref has been agreed previously by the MFish Plenary and is the annual vulnerable stock size associated with the period 1979-80 – 1981-82. The uncertain Bmsy estimate represents a slightly larger stock size than Bref (at 1.14 times Bref) and therefore is the more conservative target stock size. The Bmin used for stock assessment was the lowest stock size estimated by the stock assessment model, and for the management procedure evaluations was ½ Bref.
278. A stock assessment was last performed for CRA 8 in 2006. The stock assessment results indicated stock size in 2005-06 was approximately 2.0 times Bref and 1.75 times Bmsy.
279. Standardised CPUE is considered to be a reliable indicator of relative stock size in CRA 8 and is the abundance indicator used in the CRA 8 Management Procedure. Standardised CPUE has increased over the last two fishing years, indicating that stock size has continued to increase (Figure 2).

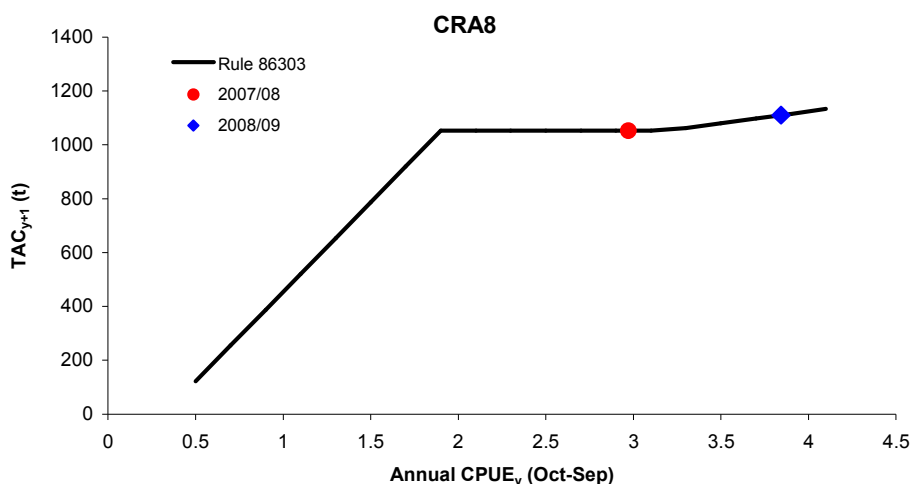


Figure 2: The 2007–08 and 2008–09 CPUE values. Figure 2 also shows a graphical representation of the CRA 8 Management Procedure, showing TAC in the next year as a function of CPUE in the current year.

CRA 8 Management Procedure

280. In March 2008, the previous Minister adopted a CRA 7 Management Procedure to guide TAC setting in the CRA 8 fishery. The procedure is described in detail in *Attachment 2* to this Final Advice Paper.
281. Operation of the management procedure is expected to deliver a harvest strategy that results in:
- a) an average stock size of 1.75 Bmsy and 2.0 Bref;
 - b) a stock size that remains above Bref with 90% probability; and
 - c) a stock size that remains above Bmin with greater than 99% probability.

Initial Advice Options

282. The NRLMG operated the CRA 8 Management Procedure for the 2009-10 fishing year beginning 1 April 2009. The NRLMG's initial advice proposed two options for TAC and allowance setting for CRA 8.

Option 1 – Vary the CRA 8 TAC and TACC based on Operation of the CRA 8 Management Procedure

283. Under Option 1, the TAC for CRA 8 would be increased from 1053 tonnes to 1110 tonnes from 1 April 2009 as specified by the CRA 8 Management Procedure. To achieve this new TAC, the CRA 8 TACC would be increased from 966 tonnes to 1023 tonnes. The allowances set for customary Maori, recreational and other fishing mortality would not be changed.

Option 2 – Maintain the current TAC and allowances for CRA 8

284. Under Option 2, the current CRA 8 TAC and allowances would be retained for the 2009-10 fishing year.
285. There is no other information to guide TAC setting options for CRA 8 in the 2009-10 fishing year. Consequently, under Option 2, the management approach to CRA 8 TAC setting would need to be revised.

Submissions Received on CRA 8

286. MFish received submissions on the proposed CRA 8 TAC and TACC variations from Te Ohu, RFC, Mr Young, NZ RLIC and CRAMAC 8. Full copies of the submissions are provided in *Attachment 3*.
287. Submissions received from the NZRFC and Te Ohu support Option 1 - set the CRA 8 TAC and TACC based on the operation of the CRA 8 Management Procedure. The basis for their support is a commitment to the ongoing application of the CRA 8 Management Procedure adopted by the previous Minister in March 2008.
288. NZ RLIC and CRAMAC 8 support setting the CRA 8 TAC and TACC based on the operation of the CRA 8 Management Procedure but proposed a variation to the initial NRLMG proposal to increase the CRA 8 TACC only. They believe some of the TAC increase should be applied to the recreational allowance. NZ RLIC and CRAMAC 8 support an alternative allocation based on achieving equal, proportionate changes when recreational and commercial catch allocations for the 1997-98 fishing year (the CRA8 Management Procedure was first applied) and the 2009-10 fishing year are compared. On this basis, NZ RLIC and CRAMAC 8 propose increasing the TACC from 966 tonnes to 1019 tonnes and increasing the recreational allowance from 29 tonnes to 33 tonnes. (Both approximately 15% higher than the allocations of 1997-98).

289. CRAMAC 8 submits that allowances should, if possible, represent the actual situation. It states there is little doubt that amateur catch has increased in CRA 8 as abundance has increased. CRAMAC 8 wishes to acknowledge that increase and also to avoid being accused of greed and failing to acknowledge other sectors.
290. Mr Young supports Option 2 – Maintain the current TAC and allowances for CRA 8. Mr Young feels current catch levels should be maintained to ensure they are sustainable.
291. The NRLMG notes RFC and CRAMAC 8 put forward other, contingent or additional management interventions outside the scope of this advice process. These are set out in the ‘Other Matters’ section towards the end of this document.

NRLMG Discussion of Matters Raised in Submissions

TAC Setting

292. Mr Young feels current catch levels should be maintained to ensure they are sustainable. The NRLMG notes best available stock information indicates the CRA 8 stock size is well above the target level and has been for several years. The NRLMG considers the existing management approach is cautious because application of the CRA 8 Management Procedure is expected to maintain an average stock size well above the target level.

Allocation of the TAC

293. NZ RLIC and CRAMAC 8 propose an alternative allocation option to that presented in the NRLMG’s initial advice.
294. The NRLMG’s preference is to consider changes to non-commercial allowances when there is new or updated information on which to base allocation decisions. The best information available at this time suggests existing customary Maori and recreational allowances are not being caught. *Table 2* below shows the current non-commercial allowances for CRA 8 and the best available estimates of non-commercial catches.

| CRA 8 | Customary | Recreational | Other Fishing Mortality |
|-------------------|-----------|--------------|-------------------------|
| Allowances | 30 tonnes | 29 tonnes | 28 tonnes |
| Estimated Catches | 2 tonne | 20.1 tonnes | 18 tonne |

Table 2: *Current allowances and estimated catches for customary, recreational, and other sources of fishing related mortality.*

295. CRAMAC 8 and amateur representatives to the NRLMG consider that increased fishing activity and success in CRA 8 has increased amateur catches beyond the current CRA 8 recreational allowance. Recreational catch surveys have been undertaken in the Fiordland Marine Area but there is no data to confirm or quantify catch increases across the whole CRA 8 fishery at this time. In compiling advice, the NRLMG relied on the catch data provided to and accepted by the MFish Plenary.
296. The NRLMG believes, however, that support should be given where there is clear agreement among sector groups for an alternative allocation approach. NRLMG stakeholder members are all supportive of the alternative allocation approach; therefore the NRLMG has amended its

preferred option to reflect the alternative allocation approach proposed by CRAMAC 8 and NZ RLIC.

Other Relevant Matters

297. RFC notes that *Table 6* on page 28 of the initial advice gives the impression that 'Other Fishing Mortality' is a result of legitimate non-commercial fishing activity, whereas it considers other fishing mortality to be a shared responsibility. It was not the NRLMG's intention to imply a link between other fishing mortality and legitimate non-commercial fishers. The NRLMG merely wished to present best available information on the other components of the TAC.

Assessment

298. Assessment of the management options against the full set of statutory considerations is set out at the end of this Final Advice paper. Key considerations and impacts are also discussed here.

Sustainability

299. The recommended increase in TAC would not pose a risk to sustainable utilisation. Best available information on the CRA 8 stock status has been presented. As set out above, the best available information suggests a stock that is well above the target stock size. The CRA 8 Management Procedure is designed to maintain stock size well above Bref with high probability. The procedure is expected to result in an average stock size of 2.0 times Bref.
300. Retaining the current TAC for CRA 8 would likely result in a further increase in stock size.

Utilisation & Value

301. The recommended new allocation approach would result in a TACC increase. Using 2007 export information, the commercial value of the recommended 53 tonne increase is estimated to be \$2.1 million.
302. The recommended new allocation approach would also result in an increase to the recreational allowance. A comparable dollar-value estimate of the recommended 4 tonne increase to the recreational allowance is not available but the NRLMG recognises rock lobster is highly sought after by amateur fishers and is taonga to Maori so holds significant non-commercial cultural, social and economic value.
303. The NRLMG notes that, even in the absence of explicit increases to non-commercial allowances, application of the CRA 8 Management Procedure to maintain a stock size well above target levels ensures the high value placed on rock lobster by Maori and by amateur fishers is recognised and that good fishing opportunities are provided for.
304. Best available information suggests existing customary Maori and recreational allowances are not being caught at this time. The NRLMG notes, however, that information on customary Maori and amateur harvest is unreliable. NZ RLIC, CRAMAC 8 and RFC all consider the recreational allowance is probably being exceeded although no quantitative information is available to determine actual harvest.
305. Any risk associated with underestimating non-commercial harvest is mitigated by the operation of the management procedure – the CPUE abundance indicator used in the procedure measures the impact *all* fishing has on abundance and varies the TAC accordingly. In the case of CRA 8, the risk is further mitigated by the agreement among sector groups to increase the recreational allowance in response to strong anecdotal information and based on achieving equal

proportionate increases in the commercial and recreational allowances from 1997-98 and 2009-10.

306. Retaining the current TAC and allowances for CRA 8 would likely result in increased catch rates in the CRA 8 non-commercial fisheries.

Credibility

307. The NRLMG believes that choosing not to implement the results of an agreed management procedure without an explicit reason would also reduce stakeholder confidence in the application of management procedures. Such a decision may also affect development and implementation of management procedures for other fisheries in New Zealand.

Recommendation

308. The NRLMG recommends that you be guided by the CRA 8 Management Procedure and agree to:

- i. ***increase*** the CRA 8 TAC from 1053 tonnes to 1110 tonnes;
And, to achieve the increase,
- ii. ***increase*** the CRA 8 TACC only from 966 tonnes to 1019 tonnes; *and*
- iii. ***increase*** the recreational allowance from 29 tonnes to 33 tonnes.

309. The NRLMG has identified no reason why you should not use the results of the CRA 8 Management Procedure to guide statutory TAC setting decisions.

310. If for any reason you consider the CRA 8 Management Procedure unsuitable to guide TAC setting in 2009-10, the NRLMG recommends that you:

- i. Retain the existing CRA 8 TAC and allowances.

311. Note, if you choose this option, a new management approach would need to be developed and adopted for the CRA 8 fishery.

OTHER MATTERS

312. In addition to commenting on the proposed sustainability measures for CRA 3, CRA 4, CRA 7 and CRA 8, many submitters commented on or proposed other management measures that are outside the scope of this advice process. These include:

- ◆ Finer scale fisheries management
- ◆ Recreational local management areas
- ◆ Improved information on non-commercial harvest
- ◆ Improved efforts to reduce illegal removals
- ◆ Removal or review of commercial concession fisheries
- ◆ Introduction of closed seasons
- ◆ Vessel Monitoring System (VMS) on all inshore commercial vessels
- ◆ Increased tangata whenua and stakeholder involvement in rock lobster management.

313. These management measures are discussed briefly below.

Fine scale fisheries management

314. Several submitters (RFC, Mr Beetham, Mr Muollo, NSFC, and Te Ohu) make reference to managing – including monitoring and setting catch limits – for rock lobster stocks at a finer scale than the existing Quota Management Areas (QMAs).

315. The 1996 Act requires the Minister to set a TAC at the QMA level and that is the focus of the advice in this document. The NRLMG notes sections 25, 25A and 25B of the Act set out the processes for, and the matters that must be considered before the Minister can recommend altering QMAs.

316. Stakeholders can also voluntarily implement catch-splitting arrangements, whereby a sector group or sector groups in a QMA agree how catch will be distributed within a QMA and set voluntary catch limits.

317. Stakeholders can also voluntarily implement catch-splitting arrangements, whereby a sector.

318. The NRLMG is not aware that there is widespread agreement about smaller management areas for rock lobster fisheries at this time. The NRLMG notes also that such areas would need to be biologically sensible and cost effective to manage.

Recreational local area management

319. RFC makes reference to “recreational only” areas in their submission, particularly in respect of CRA 3. RFC considers that if areas were set aside for exclusive use by amateur fishers then amateur fishers and locals would take whatever measures they deemed necessary to maintain sustainability of the area.

320. The NRLMG notes there are no specific provisions in the 1996 Act to establish recreational only areas for the purpose of providing for exclusive use by amateur fishers or to provide for management by amateur fishers at this time. Application of a number of tools in the 1996 Act and associated regulations could result in non-commercial only fishing areas (ie, areas where only customary and amateur fishing can occur). These include (but are not limited to):

- a) the power for the Minister of Fisheries to declare an area to be a mātaítai reserve under r 23 of the Fisheries (Kaimoana Customary Fishing) Regulations 1998 and r 20 of the Fisheries (South Island Customary Fishing) Regulations 1998);
- b) the power to make regulations under s 297 of the 1996 Act to control the taking and possession of fish, aquatic life, or seaweed from any area – for example:
 - i. for the conservation and management of the fish, aquatic life, or seaweed in a taiapure-local fishery (refer s 185);
 - ii. to give effect to the determination of a dispute resolution process concerning the effects of fishing on the fishing activities of any person (refer s 311 and Part 7 of the Act).

321. There are no provisions in the 1996 Act to provide for management of recreational only areas by amateur fishers on their own but they do input extensively to MFish processes.

Concession fisheries

322. Some submitters (BOP Forum, CRA 3 Recreational, ETMC, Mr Flack, Mr Kennedy, Mr Parker, Mr Young, Otakou Runanga and RFC) refer to the commercial concessions (alternative minimum legal sizes) that apply in CRA 3, CRA 7 or CRA 8. These submitters variously consider the relevant concession need to be removed (ETMC, Mr Flack and RFC (in respect of CRA 7 and CRA 8)), reviewed (Mr Parker and Otakou Runanga) or “addressed” (BOP Forum, CRA 3 Recreational, Mr Kennedy, Mr Young and RFC (in respect of CRA 3)).
323. The NRLMG notes the sustainability measures presented in this document are based on management procedures and stock assessments that incorporate concessions and recommend sustainable TACs accordingly. The NRLMG notes also that MFish is undertaking a review of the concession management framework in 2009.

Closed seasons

324. A large number of submitters (ETMC, Mr Flack, Mr Kennedy, Mr Muollo, NSFC, ORLIA, RFC, NZ RLIC, and Te Kupenga) refer to closed seasons in respect of particular rock lobster fisheries. These submitters variously consider closed seasons should be introduced (Mr Muollo, NSFC, RFC (in respect of CRA 3 and CRA 4) and Te Kupenga), looked at (Mr Kennedy), or existing closed seasons should be extended (ORLIA/NZ RLIC, ETMC and Mr Flack in respect of CRA 7)
325. The NRLMG notes the sustainability measures presented in this document take into account the existing management framework (which may or may not include closed seasons).
326. The NRLMG is aware a proposal to extend the CRA 7 closed season is due to be released for consultation with stakeholders on 20 February 2009. The NRLMG is also aware of voluntary closed season initiatives being implemented or discussed by commercial stakeholders in CRA 3 and CRA 4.

Information on non-commercial harvest

327. A number of submitters (CRAMAC 8, Mr Cross, NPSL, NZ RLIC, Te Kupenga, and Te Ohu) express concern about the lack of certainty in non-commercial harvest estimates.
328. The NRLMG agrees accurate and reliable data from all sectors – customary, recreational and commercial – is essential to the fishery management decision-making process. Information on customary non-commercial harvest is currently incomplete but is improving with wider

application of the Fisheries (Kaimoana Customary Fishing) Regulations 1998 and the Fisheries (South Island Customary Fishing) Regulations 1998, and as tangata whenua recognise the importance of customary fishing information to sustainable management of fisheries.

329. The NRLMG notes some research effort has been applied to the matter of improving recreational harvest estimates for rock lobster but this has done little to improve harvest estimates to date. The NRLMG agree much more work and commitment is needed to ensure good information on amateur fisheries becomes available. The NRLMG will continue to seek progress in this area, and will give its support to discussions on improving recreational harvest information at both the national and regional levels.

Illegal removals

330. Some submitters (NZ RLIC and RFC) make reference to the impact illegal removals are having on rock lobster fisheries.
331. The NRLMG agrees that significant efforts must be made to reduce and minimise incentives for illegal activity in rock lobster fisheries. The NRLMG will continue to seek progress and support robust initiatives in this area.

VMS on inshore commercial vessels

332. The submission from RFC makes reference to commercial vessels, operating in inshore fisheries, to be fitted with a VMS.
333. The NRLMG notes the proposal relates to all inshore fisheries, not just rock lobster fisheries. The NRLMG therefore recommends the RFC discuss its proposal with SeaFIC and with MFish.

Tangata whenua and stakeholder involvement in rock lobster management

334. Several non-commercial submitters (NSFC, Otakou Runanga, Te Kupenga, and Te Ohu) make reference to greater involvement by tangata whenua and recreational groups in rock lobster management.
335. The NRLMG acknowledges a high level of involvement by all sectors in management decisions is desirable, and notes that it makes significant effort to ensure national and regional stakeholder organisations and groups have an opportunity to participate in its processes. The NRLMG encourages submitters to talk with their NRLMG sector contacts about how to improve their participation in the group's processes.
336. The NRLMG notes stakeholder organisations and groups also have opportunities to engage with MFish, who also participate in NRLMG processes, about rock lobster issues via customary iwi and recreational forums and other stakeholder meetings.

Additional comments

337. For CRA 4, Te Kupenga makes reference to changes to: the MLS for female and male lobsters across all sectors, recreational daily bag and vessel limits, and pot design. The NRLMG recommends that, in the first instance, Te Kupenga should discuss these proposals further with other stakeholders in the fishery and with their NRLMG sector contacts and/or MFish.

STATUTORY CONSIDERATIONS

338. In considering the proposals set out in this paper, the following statutory considerations have been taken into account for CRA 3, CRA 4, CRA 7 and CRA 8:

International Obligations and Treaty of Waitangi Settlement Act 1992 (s 5)

339. **Section 5** of the Act requires you to act in a manner consistent with New Zealand's international obligations and Treaty of Waitangi (Fisheries Claims) Settlement Act 1992. To this end, the provisions of general international instruments such as UNCLOS and the Fish Stocks Agreement have been implemented through the provisions of the Act. The NRLMG is not aware of any specific international obligations that would be affected by the proposed TACs and allowances.
340. The NRLMG considers the proposed options are consistent with the obligations relating to the Treaty of Waitangi (Fisheries Claims) Settlement Act 1992. The NRLMG recognises that rock lobster (koura) is an important taonga species. All proposals seek to maintain good fishing opportunities, or improve stock health and therefore improve fishing opportunities, for all sectors including commercial and customary Maori. For CRA 3 and CRA 4 status quo options represent a risk to short-term and long-term customary Maori value. These risks are set out in the main body of the paper.
341. The NRLMG notes that national-level representatives of customary fishing interests are members of the NRLMG and have contributed to the development of the proposals. Opportunities were provided for many regional level customary Maori interests to input into the advice development. Some regional-level CRA 3 and CRA 4 customary Maori interests helped to identify the TAC-setting options presented. The NRLMG consulted with and, where provided, has discussed and considered the views of tangata whenua on the proposals presented in initial advice.

Purpose of the Act (s 8)

342. **Section 8** of the Act describes the purpose of the Act as being to provide for the utilisation of fisheries resources while ensuring sustainability, and defines the meanings of utilisation and sustainability. The management options presented seek to achieve the purpose of the Act. The options presented seek to achieve sustainable TACs and take into account the respective costs of management versus utilisation benefits.

Environmental considerations (s 9)

343. **Section 9** of the Act prescribes three environmental principles that you must take into account when exercising powers in relation to utilising fisheries resources and ensuring sustainability.
- a) **Section 9(a)** requires that associated or dependent species (ie, those that are not harvested) should be maintained above a level that ensures their long-term viability. Potting and hand gathering fisheries have a relatively low level of by-catch and the NRLMG is not aware of any interactions between the fisheries and non-harvested species of concern.
 - b) **Section 9(b)** requires the maintenance of biological diversity of the aquatic environment be taken into account. Potting is the only commercial fishing method used to harvest rock lobsters in CRA 7 and CRA 8. Some information is available on the impact of this method on the aquatic environment, and Australian research suggests there is little impact on seaweed and other benthic communities, including fragile coral reef ecology, from rock lobster potting. Consequently, the NRLMG considers it unlikely the proposed

changes to the TACs and TACCs will have a demonstrable adverse effect on biological diversity in CRA 3, CRA 4, CRA 7 or CRA 8.

- c) **Section 9(c)** requires the protection of habitats of particular significance to fisheries management. The proposed changes to TACs and TACCs are unlikely to affect habitats of particular significant to fisheries management; identified habitats of significance have already been provided protection through mechanisms such as the Fiordland Marine Management Act 2005, which prohibits all commercial fishing within the internal waters of Fiordland and introduces protection in an area that is recognised as being internationally important.

Information Principles (S 10)

344. **Section 10** of the Act sets out the information principles, which require that decisions be based on the best available information, taking into account any uncertainty in that information, and applying caution when information is uncertain, unreliable, or inadequate. In accordance with s 10, the absence of information should not be used as a reason to postpone, or fail to take, any measure to achieve the purpose of the Act, including providing for utilisation at levels considered to be sustainable. A thorough review of available information has been undertaken by the NRLMG and the best available information has been used to evaluate the management options presented. The NRLMG has endeavoured to set out the relevant uncertainty in, and inadequacy of, that information so that the appropriate caution can be applied in assessing the proposed management options.

Sustainability Measures (s 11)

345. When setting or varying a sustainability measure, **Section 11(1)** of the Act requires the taking into account of: (i) any effects of fishing on any stock and the aquatic environment; (ii) the existing management controls that apply to the stock or area concerned; and (iii) the natural variability of the stock.
346. The adverse effects of fishing on the aquatic environment are discussed under the Environmental Considerations section.
347. Apart from the existing TAC, TACC and allowances, a range of management controls apply to rock lobster fisheries including minimum legal sizes, daily bag limits for amateur fishers, method restrictions, protection of egg-bearing females, closed areas and closed seasons (CRA 3 and CRA 7 only).
348. The proposed changes to TACs and TACCs are unlikely to affect these measures. Industry reports, however, that the closed season in CRA 7 may limit the ability of commercial operators to harvest the proposed increased TACC. A proposal to extend the CRA 7 commercial season is currently in the MFish internal prioritisation process.
349. Recruitment to rock lobster stocks is highly variable. This variability was taken into account by the RLFAWG and the NRLMG when developing stock assessment model for CRA 3 and the management procedures for CRA4 4, CRA 7 and CRA 8.
350. **Sections 11(2)** requires regard to: (i) any regional policy statement, regional plan or proposed regional plan under the Resource Management Act 1991; (ii) any management strategy or management plan under the Conservation Act 1987 that apply to the area and are considered relevant; and (iii) sections 7 and 8 of the Hauraki Gulf Marine Park Act 2000.
351. There are seven regional councils with jurisdictional boundaries covering CRA 3, CRA 4, CRA 7 and CRA 8 (Gisborne, Hawke Bay, Horizons, Greater Wellington, Otago, Southland, and West

Coast). The NRLMG is not aware of anything in the proposed coastal plans for these councils that would be affected by this proposal.

352. There are six Department of Conservation Conservancies with jurisdictional boundaries covering CRA 7 and CRA 8 (East Coast/Hawke Bay, Wellington, Wanganui, Otago, Southland, and West Coast). The NRLMG is not aware of anything in the proposed strategies for these conservancies that would be affected by this proposal.
353. CRA 3, CRA 4, CRA 7 and CRA 8 fisheries do not intersect with the Hauraki Gulf Marine Park; therefore there are no relevant considerations under the Hauraki Marine Park Act 2000.
354. **Section 11(2A)** requires you to have regard to: (i) any conservation services or fisheries services and any decision not to require conservation services or fisheries services; and (ii) any relevant fisheries plan approved under s 11 of the Act.
355. The NRLMG does not consider that existing or proposed services materially affect this proposal. No decision has been made not to require a service in these fisheries. The NRLMG is not aware of any relevant fisheries plans approved under s 11 of the Act. The NRLMG is aware that Ngati Kahungunu is in the process of developing a fisheries plan relating to Ngati Kahungunu fisheries, which intersect with CRA 4.
356. The NRLMG notes the Fiordland Marine Management Act 2005 requires you to have regard to any advice or recommendations provided by the Fiordland Marine Guardians on any matters covered by the Act. The NRLMG notes the Fiordland Marine Guardians were consulted on the management options presented and did not provide any advice or recommendations.

TAC Setting Considerations (s 13)

357. Rock lobster stocks are managed under **Section 13** of the Act. Under s 13(2) you must set a total allowable catch that:
- a) maintains the stock at or above a level that can produce the maximum sustainable yield, having regard to the interdependence of stocks; or
 - b) enables the level of any stock whose current level is below that which can produce the maximum sustainable yield to be altered—
 - (i) in a way and at a rate that will result in the stock being restored to or above a level that can produce the maximum sustainable yield, having regard to the interdependence of stocks; and
 - (ii) within a period appropriate to the stock, having regard to the biological characteristics of the stock and any environmental conditions affecting the stock; or]
 - a) enables the level of any stock whose current level is above that which can produce the maximum sustainable yield to be altered in a way and at a rate that will result in the stock moving towards or above a level that can produce the maximum sustainable yield, having regard to the interdependence of stocks.
358. In the case of *Antons Trawling Company v The Minister of Fisheries* (High Court, Wellington, CIV 2007-485-2199, 28 February 2008) Miller J said that before a TAC could be set under the above provisions you must be provided with an estimate of both current biomass and the biomass that can produce the maximum sustainable yield. Neither of these figures are available for Rock

Lobster so s 13 (2A), which was passed as a consequence of Miller J's decision, becomes applicable.

359. **Section 13(2A)** says that:

(2A) For the purposes of setting a total allowable catch under this section, if you consider that the current level of the stock or the level of the stock that can produce the maximum sustainable yield is not able to be estimated reliably using the best available information, you must—

- a) not use the absence of, or any uncertainty in, that information as a reason for postponing or failing to set a total allowable catch for the stock; and
- b) have regard to the interdependence of stocks, the biological characteristics of the stock, and any environmental conditions affecting the stock; and
- c) set a total allowable catch—
 - (i) using the best available information; and
 - (ii) that is not inconsistent with the objective of maintaining the stock at or above, or moving the stock towards or above, Bmsy.

360. It is the NRLMG's view that the TAC variations guided by operation of the CRA 4, CRA 7 and CRA 8 management procedures meet the requirement of being "not inconsistent with" the objective of maintaining the stock at or above, or moving the stock towards or above, Bmsy.

361. For CRA 3, the 2008 Stock Assessment provides an estimate of current biomass. The estimate of Bmsy is considered unreliable therefore a reference period biomass that has been accepted as a suitable proxy target for Bmsy by the RLFAWG and MFish Plenary is used. The NRLMG considers the range of options presented to address low abundance and an unsustainable TAC in CRA 3 to meet the requirement of being "not inconsistent with" the objective of maintaining the stock at or above, or moving the stock towards or above, Bmsy.

362. In considering the way in which and rate at which a stock is moved towards or above a level that can produce maximum sustainable yield, subsections (2)(b) or (c), or (2A) (if applicable) state that you shall have regard to such social, cultural, and economic factors as you consider relevant. Available information suggests CRA 3 and CRA 4 are below target stock size and need rebuilding. Regard is given to social, cultural and economic factors in assessing the TAC options put forward to rebuild these fisheries.

TACC Setting Considerations (s 20 and 21)

363. **Section 20 and 21** specify a number of matters that must be taken into account when setting or varying a TACC. Section 21 requires you to allow for non-commercial Māori and amateur fishing interests, and other fishing mortality when setting or varying the TACC. The NRLMG notes that information on non-commercial harvest is scarce and uncertain. For CRA 3 and CRA 4, the proposals to reduce only the TACCs result in a greater proportion of the TAC being allocation to customary Maori and amateur fishing interests. An option of pro-rating a proposed CRA 3 TAC reduction across the TACC and the recreational allowance is presented and discussed in the body of the paper.

364. When considering allocation of the proposed TAC increases for CRA 7 and CRA 8, best available information on the harvest needs of customary Maori and amateur fishers is considered, along with risks association with uncertain information and the views of stakeholders.

365. Allowances for other fishing mortality are left unchanged. The allowances are based on best available, but highly unreliable, information about illegal unreported catch in each of the fisheries.
366. **Section 21(4)** also requires that any mātaimai reserve or closures/restrictions under s 186A to facilitate customary Maori fishing be taken into account. Mātaimai reserves and section 186A closures are located within CRA 3, 4, 7 and 8 – the Moremore (Hawke Bay), Puna wai-Toriki (Otago), Tuma Toka and Te Whaka Te Wera (Southland) mātaimai reserves and the Pukerua Bay 186A closure (Wellington). The NRLMG considers that the management options presented in this paper will contribute to sustainable utilisation of rock lobster fishstocks and will benefit abundance both inside and outside mātaimai reserves and s 186A closures. The risks posed to sustainability and utilisation values, including customary Maori utilisation are set out in the body of the paper.
367. **Section 21(5)** also requires that any regulations to prohibit fishing made under s 311 be taken into account when setting allowances for amateur fishing interests. The NRLMG is not aware of any restrictions under s 311 that have been placed on fishing in any area within CRA 3, 4, 7 or 8.

Administrative Issues

368. Implementing decisions to vary TACs and allowances would require the publishing of Gazette Notices under s 13 (TACs) and s 20 (TACCs) of the Act, together with some publicity to ensure fishers are aware of the changes.

3. SUMMARY OF RECOMMENDATIONS

FOR CRA 3:

The NRLMG recommends that you:

EITHER

- i. **decrease** the CRA 3 TAC from 319 tonnes to 293 tonnes;
And, to achieve the decrease,
- ii. **decrease** the CRA 3 TACC only from 190 tonnes to 164 tonnes.

OR

- iii. **decrease** the CRA 3 TAC from 319 tonnes to 257 tonnes;
And, to achieve the decrease,
- iv. **decrease** the CRA 3 TACC only from 190 tonnes to 128 tonnes.

OR

- v. **decrease** the CRA 3 TAC from 319 tonnes to 257 tonnes;
And, to achieve the decrease,
- vi. **decrease** the CRA 3 TACC only from 190 tonnes to 134 tonnes;
And
- vii. **decrease** the CRA 3 recreational allowance from 20 tonnes to 14 tonnes.

Note: It is proposed that, irrespective of the option chosen for CRA 3 this year, a management procedure will be developed during 2009 for this stock for your consideration, which, if adopted, will guide TAC setting from 1 April 2010.

FOR CRA 4:

The NRLMG recommends that you:

EITHER

- a) **Agree** to be guided by the CRA 4 Management Procedure; *and*
- viii. **decrease** the CRA 4 TAC from 771 tonnes to 460 tonnes;
And, to achieve the decrease,
- ix. **decrease** the CRA 4 TACC only from 577 tonnes to 266 tonnes (NRLMG recommended option).

OR

If for any reason you consider the new CRA 4 Management Procedure unsuitable to guide TAC setting in 2009-10:

- b) **Agree** to retain the existing CRA 4 TAC and allowances; and
 - x. **note:** because available information suggests the current CRA 4 TAC may be unsustainable, if you choose option b), a CRA 4 stock assessment would be completed in 2009 to provide information on the status of the fishery and to assess a range of alternative TAC setting options.

FOR CRA 7:

The NRLMG recommends that you:

EITHER

- c) **Agree** to be guided by the CRA 7 Management Procedure; and
 - xi. **increase** the CRA 7 TAC from 143.88 tonnes to 209 tonnes;
And, to achieve the increase,
 - xii. **increase** the CRA 7 TACC only from 123.88 tonnes to 189 tonnes (NRLMG recommended option).

OR

If for any reason you consider the new CRA 7 Management Procedure unsuitable to guide TAC setting in 2009-10:

- d) **Agree** to retain the existing CRA 7 TAC and allowances; and
 - xiii. **note:** if you choose option d), a new management approach would need to be developed and adopted for the CRA 7 fishery.

FOR CRA 8:

The NRLMG recommends that you:

EITHER

- e) **Agree** to be guided by the CRA 8 Management Procedure; and
 - xiv. **increase** the CRA 8 TAC from 1053 tonnes to 1110 tonnes;
And, to achieve the increase,
 - xv. **increase** the CRA 8 TACC from 966 tonnes to 1019 tonnes;
And
 - xvi. **increase** the recreational allowance from 29 tonnes to 33 tonnes (NRLMG recommended option).

OR

If for any reason you consider the new CRA 8 Management Procedure unsuitable to guide TAC setting in 2009-10:

f) **Agree** to retain the existing CRA 8 TAC and allowances:

xvii. **note:** if you choose option f), a new management approach would need to be developed and adopted for the CRA 8 fishery.