



Ministry of
Fisheries
Te Tautiaki i nga tini a Tangaroa

Review of Rock Lobster Commercial Concession Area Regulations – Initial Position Paper August 2011



Introduction

1 This initial position paper (IPP) provides the Ministry of Fisheries' (the Ministry's) initial views on the review of spiny rock lobster (*Jasus edwardsii*) commercial Concession Areas regulations. It outlines the Ministry's initial assessment of the impacts (if any) that Concession Areas have on stock sustainability and the ability for all sectors to maximise their various use benefits, including social, economic and cultural benefits.

2 The Ministry developed this IPP for the purpose of consultation as required under the Fisheries Act 1996 (the Act). Initial feedback on the paper has been provided by the sector representatives of the National Rock Lobster Management Group (NRLMG) and their feedback has been incorporated where considered appropriate. The Ministry emphasises the views outlined in this paper are preliminary and are provided as a basis for consultation with stakeholders.

3 In September 2011, the Ministry, in collaboration with the NRLMG, will compile the Final Advice Paper (FAP) for the attached proposal. This document will summarise the Ministry's and stakeholder views on the issues being reviewed, and provide final advice and recommendations to the Minister of Fisheries and Aquaculture (the Minister). A copy of the FAP and subsequently the Minister's letter setting out his final decisions will be posted on the Ministry's website (www.fish.govt.nz) as soon as it becomes available. Hard copies of the documents will be available on request.

Deadline for Submissions

4 The Ministry welcomes information and comments from tangata whenua, fishery stakeholders and other interested parties on the proposals. All written submissions on this IPP must be received by the Ministry no later than **5 pm Friday, 9 September 2011**.

5 Written submissions should be sent directly to:

Trudie Macfarlane
Ministry of Fisheries
P O Box 1020
Wellington

or emailed to trudie.macfarlane@fish.govt.nz

6 All submissions are subject to the Official Information Act 1982 (the OIA) and can be released, if requested, under this Act. If you have specific reasons for wanting to have your submission withheld, please set out your reasons in the submission. The Ministry will consider those reasons when making any assessment for the release of submissions if requested under the OIA.

Initial Position Paper – Review of Rock Lobster Concession Area Regulations

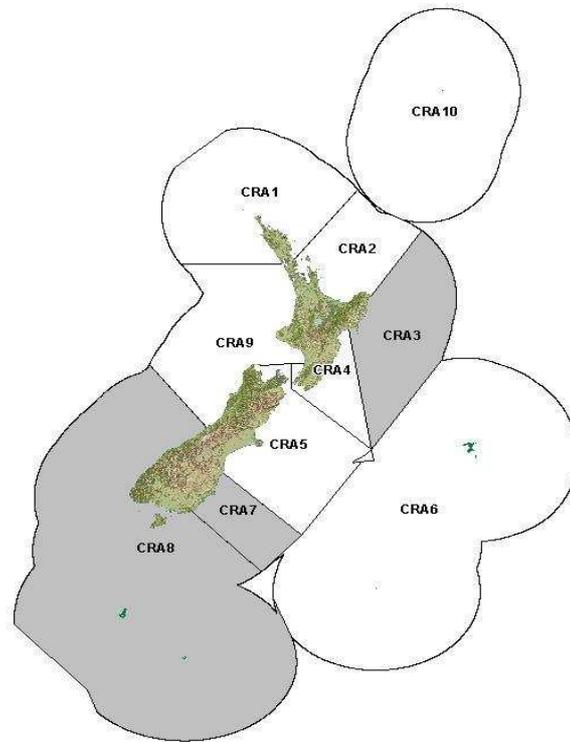


Figure 1: Rock lobster Quota Management Areas
(grey shading refers to areas where “concession areas” apply)

Summary

1 The Ministry of Fisheries (the Ministry) is seeking tangata whenua and stakeholder views on the review of spiny rock lobster (*Jasus edwardsii*) commercial Concession Area regulations.

2 “Concession Areas” allow commercial fishers to harvest rock lobster at a smaller size than the 54/60 mm tail width (TW) minimum legal size (MLS). There are three rock lobster Concession Areas in New Zealand: CRA 3 (Gisborne), CRA 7 (Otago) and CRA 8 (Southern) (refer Figure 1 above).

3 Six management options are presented in this paper for consideration (Table 1). The options propose to retain or remove each set of Concession Area regulations based on an analysis of costs and benefits. If a decision is made to remove a set of Concession Area regulations this would result in a male/female 54/60 mm TW MLS regime for commercial and recreational fishers in the management area.

Stock	Summary of Options	
CRA 3	Option 1A Retain the CRA 3 Concession Area regulations	Option 1B Remove the CRA 3 Concession Area regulations
CRA 7	Option 2A Retain the CRA 7 Concession Area regulations	Option 2B Remove the CRA 7 Concession Area regulations
CRA 8	Option 3A Retain the CRA 8 Concession Area regulations	Option 3B Remove the CRA 8 Concession Area regulations

Table 1: Proposed CRA 3, CRA 7 and CRA 8 Concession Area options

4 The management goal for each rock lobster fishery is to ensure benefits are maximised within sustainable limits. This is achieved by setting appropriate Total Allowable Catches (TACs), allowances and other management tools based on the biological characteristics of the stock and socio-economic factors.

5 The application of different management tools between the recreational and commercial sectors can be appropriate in some cases to ensure sustainability or to maximise benefits. When a different tool is applied between sectors it should not impact unreasonably on another sectors ability to utilise the resource or increase cost to the point where it reduces overall benefit. However, reductions in the benefit able to be obtained by one sector may be acceptable if overall benefit from the fishery is stable or increasing. If the primary management objective is to maximise overall benefit from the fishery then broadly the management focus should be on allowing the sector which values the resource the most to maximise their return from the allowance made for them.

6 Available information suggests different rock lobster MLS's between sectors and areas may impact on the ability of the non-commercial sector to maximise their various use benefits. Concerns have been expressed by some recreational fishery participants that recreational fishing success is affected by the CRA 3 and CRA 7 Concession Areas, but the extent of these impacts is uncertain and cannot be quantified with current information.

7 Concession Areas provide economic benefits to the commercial sector. The areas enable commercial fishers to target a larger size range of lobsters than in non-concession areas, and allow the industry to take advantage of market drivers for different lobster sizes. Removal of a Concession Area will have an economic impact on the commercial sector, but the extent of this impact is difficult to quantify because there is no statutory requirement for the industry to separately report the weight of 'concession sized lobsters'¹ to the Ministry.

8 Based on an analysis of research and commercial catch information the Ministry estimates the immediate removal of the CRA 3 Concession Area MLS could potentially

¹ 'Concession sized lobsters' are lobsters from the Concession Area MLS to the 54/60 mm TW MLS.

result in a \$2 million loss. Based on information supplied by the CRA 8 industry the Ministry estimates the removal of the CRA 8 Concession Area MLS could potentially result in up to a \$5.7 million loss. The estimated loss in revenue is expected to be temporary in CRA 3 and would return to previous levels once rock lobsters grow through to the new MLS. However, this may not be the case in CRA 8 where the taking of 'run-fish' (migrating lobsters) is an important aspect of the commercial fishery. The Ministry does not have information to assess the extent of the impact of removing the CRA 7 Concession Area.

9 The impacts of Concession Area MLS's on non-commercial fishers may only be felt, or are exacerbated if overall abundance is low and the availability of legal sized lobsters for the recreational sector is limited. In this situation removal of Concession Area regulations may provide increased benefits to the recreational sector. However, greater benefit to all sectors could be obtained by rebuilding the fishery rapidly to greater levels of abundance.

10 A further option to mitigate the current impact of Concession Areas on recreational fishers is to allow them access to the Concession Area MLS. This change would reduce perceptions of inequity of access between sectors in these areas but may not increase benefits to recreational fishers (if benefit is driven primarily by harvesting larger size lobsters). Also, allowing recreational fishers to harvest rock lobster at a smaller size than the 54/60 TW MLS that would apply in non-concession areas could increase the Ministry's compliance risk by providing an opportunity for poachers to conceal recreationally caught undersized rock lobster from non-concession areas. While the scale of this offending would be difficult to quantify, the cost of enforcement and monitoring nearly always increases where a disparity between areas is evident.

New Zealand's Fisheries Management Framework

11 A wide variety of fishery management tools are imposed on customary, recreational and commercial fishers to ensure fishing is sustainable under New Zealand's quota management system (QMS), both in terms of the fish that is taken as well as to manage the effects of fishing on the aquatic environment. The fishery management tools that apply to each sector reflect the different ways each sector operates in a fishery (as recognised in fisheries legislation). In some cases it is appropriate for the same management tool to apply across all sectors. For example, some areas are closed to all fishers to protect juvenile fish or reduce impacts of fishing on protected species.

12 In other cases it can be appropriate for different management tools to apply to each sector. For example, to help ensure the sustainable utilisation of a specific species within a fisheries management area, recreational fishers are required to keep within daily bag limits whereas commercial fishers can land as much catch as they like on a single day as long as they can balance their catch with annual catch entitlement.

13 Different management tools may be employed for each sector to ensure sustainability or to maximise benefits. When applied for the latter reason different application of a tool between sectors should not impact unreasonably (from the decision maker's perspective and in the context of the relevant legislation) on another sectors ability to utilise the resource or increase cost to the point where it reduces overall benefit from the fishery.

Rock Lobster Minimum Legal Size

14 MLS's are one of the most widely accepted tools to manage fisheries. When applied for biological reasons, MLS's are usually set at the size at which 50% of a population becomes sexually mature.

15 When MLS's were first introduced for rock lobsters in the mid-1900s, their use was based on three key objectives:

1. allowing rock lobsters to become sexually mature and reproduce (ensure egg production)
2. increase egg per recruit by allowing larger sexually mature rock lobsters to reproduce (maximise egg production), and
3. increase yield per recruit by allowing rock lobsters to grow to a larger size before they are harvested (maximise yield).

16 The method of measuring rock lobsters has been re-examined on several occasions. The MLS measure has changed from total length, to tail length (TL) and finally to a TW measure (except CRA 7). A TW measure that was equivalent to the previous TL measure was explored and introduced because of concerns with the varying amount of pressure being applied to rock lobster tails when measuring and the subsequent mortality of sub-legal lobsters from heavy measuring.

17 The current rock lobster MLS's are 54 mm TW for males and 60 mm TW for females for commercial and recreational fishers, except for rock lobster taken by commercial fishers from a "Concession Area". Different TW MLS's are needed for each sex because female lobsters generally have wider tails than males of a similar body size. Customary fishers have no MLS regime; however, a minimum or maximum size limit can be voluntarily specified by an authorised permit issuer.

Summary of Rock Lobster Concessions Areas

18 In some areas commercial fishers are allowed to harvest rock lobster at a smaller size than the 54/60 mm TW MLS. These areas are known as "Concession Areas". There are three Concessions Areas in New Zealand. They are all of CRA 3, all of CRA 7 excepting an area alongside the CRA 8 boundary (a "buffer zone"), and all of CRA 8. Each

Concession Area was introduced for different reasons, at different times and each contains varying regulations controlling the taking, landing, processing and sale of rock lobsters.

19 A summary and background of each Concession Area is provided below.

CRA 3 (Gisborne)

20 The CRA 3 Concession Area regulations allow commercial fishers to take male rock lobsters at or above 52 mm TW during June, July and August. At other times of year the male MLS is 54 mm TW and at all times of year the female MLS is 60 mm TW. The CRA 3 fishery is closed to commercial fishing by regulation in May.

21 The CRA 3 Concession Area regulations were introduced in 1993 as an outcome of a wider review of the CRA 3 management regime by a group of regional customary, recreational and commercial stakeholders (the group was known as the "CRA 3 User Group"). The other management measures that were proposed by the Group in 1993 included (but were not confined to):

1. 50% decrease in the Total Allowable Commercial Catch (TACC) (from 327 to 164 t)
2. Closed season to all users during September, October and November
3. Additional closures to commercial fishers from 1 December until 31 January and 1 May until 31 May
4. Prohibition on removing female lobsters during June, July and August.

22 The 1993 management regime was introduced to reduce commercial take to allow the stock to rebuild, increase the unit value of the catch so that the effect of reduced commercial catches would be mitigated, and reduce illegal take and handling-related mortality. The CRA 3 Concession Area regulations specifically provided commercial fishers with access to previously unavailable lobsters and consequently increased the value of the catch thus mitigating some of the impact of quota cuts.

23 The then Minister of Fisheries implemented the CRA 3 User Group's proposed management regime for a period of three years from 1993-94, at which time it was agreed that the package would be reviewed. In 1996 an evaluation of the management regime occurred and resulted in the same suite of management measures remaining, except for a requirement for an annual review to be conducted by the CRA 3 User Group.

24 Elements of the CRA 3 management regime were revised over time by the CRA 3 User Group and more recently by the National Rock Lobster Management Group (NRLMG). The only regulated elements of the 1993 management package that remain today are the May closure to commercial fishing and the Concession Area MLS. A voluntary commercial closed season from 1 September to 15 January applies to statistical areas 909 (East Coast) and 910 (Gisborne). In the other CRA 3 statistical area, 911 (Mahia), a voluntary MLS of 54

mm TW applies in June, July and August for male rock lobsters instead of the closure because September to January is a productive period in the Mahia fishery.

CRA 7 (Otago)

25 The CRA 7 Concession Area regulations allow commercial fishers to take male and female rock lobsters at or above 127 mm TL from 1 June to 19 November in any year. The approximate TW equivalents of the TL measure are 45.6 mm TA for males and 46.9 mm TW for females.² The CRA 7 fishery is closed to commercial fishing from 20 November to 31 May of any year.

26 Since the mid-1900's the commercial MLS applying to rock lobsters in CRA 7 has differed from the MLS applying elsewhere in New Zealand. The CRA 7 commercial MLS was introduced to support a market for canned rock lobster tails. Information available at the time of introduction of the measure also suggested that CRA 7 lobsters did not grow to and beyond the larger MLS that applied in other management areas and large numbers of smaller-sized lobsters moved out of the fishery at certain times of year – emigrating south towards Foveaux Strait.

27 For further information on the history of the CRA 7 Concession Area see Appendix 1.

CRA 8 (Southern)

28 The CRA 8 Concession Area regulations allow commercial fishers to take female rock lobsters at or above 57 mm TW at any time of year. The male MLS is 54 mm TW.

29 The change in measure from TL to TW in 1988 resulted in a loss of access to significant quantities of previously available rock lobsters in the Southern fishery (about a 28% reduction in landings between 1987 and 1988). The TW measure affected the CRA 8 fishery, especially for females, because lobster tails were generally narrower for a given length in the south (catch sampling information showed the average TW equivalent to the previous TL measures of 152 mm for female lobsters in the CRA 8 fishery was 56 mm).

30 Based on an analysis of commercial catch information and discussions with commercial fishers, the then Minister of Fisheries granted a female size concession in the CRA 8 fishery for the 1989/90 and 1990/91 seasons; 56 and 57 mm TW respectively. The Minister then decided that the 57 mm TW would be retained for the 1991/92 season. The Concession Area MLS has remained ever since.

31 For further information on the history of the CRA 8 Concession Area see Appendix 2.

² Tail width equivalent calculations are based on work described by Breen, P.A., Booth, J.D., and Tyson, P.J. 1988: Feasibility of a minimum size limit based on tail width for the New Zealand red rock lobster, *Jasus edwardsii*. New Zealand Fisheries Technical Report No. 6.

Rationale for Review

32 In 2006, the then Minister of Fisheries deferred a decision on a proposal to allow the domestic sale of concession rock lobster taken from the CRA 8 Concession Area until a general review of all rock lobster Concession Areas was completed.

33 Concession Areas are considered contentious by some non-commercial fishery participants because they consider that:

1. concessions provide an access advantage to commercial fishers, particularly in times of low abundance;
2. concessions lead to a faster reduction in the “catchability” of rock lobsters for recreational fishers than other sectors in times of low abundance; and/or,
3. they increase opportunities for trafficking of illegal undersize rock lobster.

34 The Minister of Fisheries supports the review of all rock lobster Concession Areas and a resolution to disagreements between fishery participants on the costs and benefits of the existing Concession Areas.

Proposed Management Options

35 The Ministry is seeking comments and information from tangata whenua and stakeholders on the following management options (also refer Table 1). The options propose to retain or remove each set of Concession Area regulations based on an analysis of costs and benefits.

Options 1A, 2A, and 3A – Retain Rock Lobster Concession Area Regulations (the status quo)

36 Under Options 1A, 2A and 3A the Concession Area regulations in CRA 3, CRA 7 and CRA 8 would be retained.

37 If a decision is made to keep all or some of the current Concession Area regulations, the Ministry will undertake a review of the regulatory framework applying to Concession Areas to ensure it is achieving desired fisheries management outcomes in the most cost-effective way without imposing unnecessary constraints on a sector.

38 The Ministry will also review harvest strategy objectives for fisheries with Concession Areas to potentially consider the rebuild of stocks to optimal levels at a faster rate and to maintain the stock at optimal levels with more certainty. Such an approach may provide more direct and realisable benefits to each sector.

Options 1B, 2B and 3B – Remove Rock Lobster Concession Area Regulations

39 Under Options 1B, 2B and 3B the current rock lobster Concession Area regulations in CRA 3, CRA 7 and/or CRA 8 would be removed as soon as is practicable. If a decision is made to remove a set of Concession Area regulations this would result in a male/female 54/60 mm TW MLS regime for commercial and recreational fishers in all management areas.

40 The approach used to remove a Concession Area MLS would take into account the impacts of the removal on the management procedures,³ currently operating in these fisheries and the economic and social impacts.

41 Under this option, each set of Concession Area regulations would be revoked or amended.⁴ The timing of regulatory change would be linked to the approach chosen to remove a specific Concession Area.

Analysis of Management Options

42 The management goal for each fishery is to ensure benefits are maximised within sustainable limits. This is achieved by setting appropriate TACs, allowances and other management controls based on the biological characteristics of the stock and socio-economic factors.

43 In this section different rock lobster MLS's between sectors and areas are considered relative to their impact on the ability to:

1. Ensure stock sustainability
2. Maximise current and future benefits from the use of fisheries.

44 A generic outline of issues relevant to all Concession Areas is undertaken first before each Concession Area is analysed individually. However, detailed quantitative recreational information that would be useful to aid such an analysis is not currently available. This information includes recreational catches and catch rates, and changes to recreational benefit derived from the fishery over time.

45 Some estimates of the proportion of concession sized lobsters in landings are available to the Ministry, but information on the contribution of concession sized lobsters to the overall value of rock lobster catch and the relative value of concession versus non-concession lobsters through time, to the industry is uncertain.

³ A management procedure is a tool used to guide the setting of catch limits. It specifies what data will be used to make catch limit decisions and how it will be collected and analysed, and it contains a harvest control that determines what the specific output will be (ie, the TAC).

⁴ Fisheries (Central Area Commercial Fishing) Regulations 1986, regulations 14K, L and M
Fisheries (South-East Area Commercial Fishing) Regulations 1986, regulations 6, 6A, 7, 7A and 8A
Fisheries (Southland and Sub-Antarctic Areas Commercial Fishing) Regulations 1986, regulations 5C, D and E.

Analysis of Concession Area Regulations (CRA 3, CRA 7 and CRA 8 combined)

Ensuring Sustainability of Rock Lobster Stocks

46 The current management approach for rock lobster, in particular the stock assessment and TAC setting processes, can ensure stock sustainability regardless of the MLS in place. In effect, for any combination of the male/female MLS there is a corresponding sustainable catch limit.

47 Rock lobster stock sizes have both sharply increased and sharply decreased in the context of Concession Area and non-Concession Area fisheries. These fluctuations have been the result of a difference between the catch limit (rock lobsters removed from the fishery) and recruitment (rock lobsters entering the fishery). Management procedures are now used in several rock lobster fisheries, including all Concession Area fisheries, to enable more timely responses to fluctuations in available rock lobsters and ensure ongoing sustainability of a fishery.

48 Some non-commercial stakeholders consider rock lobster recruitment to be directly and negatively impacted by Concession Area MLS's (in particular in the CRA 3 Concession Area MLS). A key objective of management is to ensure sustainability by protecting spawning stock abundance to maintain reproductive output, and secure recruitment into the fishery. A rock lobster MLS generally allows rock lobsters to become sexually mature and reproduce before becoming vulnerable to harvesting. A MLS also increases the reproductive potential of rock lobsters by allowing larger, sexually mature lobsters to reproduce. The relationship between current MLS's and sexual maturity is discussed for each fishery in the next section.

49 Observation suggests a key influence on recruitment success in rock lobster fisheries, however, is environmental. This is most clearly demonstrated in CRA 3, where very large puerulus settlements,⁵ and subsequent recruitments into the fishery, have been observed when the stock was depleted and very small settlements have been observed with very large stock sizes. In general, recruitment into rock lobster fisheries is highly variable and the relationship between puerulus settlement and subsequent recruitment into a fishery is not well known.

50 Logically there will be a point at which recruitment is critically affected by spawning stock size. After all, nil sexually mature rock lobsters would mean nil egg production and nil settlement unless the system was open to eggs from other sources. In most areas, larvae are thought to have originated a considerable distance from the settlement site.

51 Individual rock lobster fisheries are likely to be open systems. Research and experience has revealed that eggs produced in one management area do not necessarily replenish the rock lobster population in that area and extensive mixing and movement of

⁵ late larval-stage lobsters.

larvae is likely to occur between management areas. Consequently, it is important to consider breeding success at the “whole of New Zealand” scale, as well as at the scale of individual stocks.

52 Removal of a Concession Area MLS could result in a short-term increase in handling related mortality because commercial fishers would be required to return more lobster to the sea. A handling mortality level of 10% is assumed in stock assessment models. It is unknown if this level would be sufficient to address risks associated with increased handling.

Maximising Benefits from Rock Lobster Fisheries

53 MLS’s can influence the benefits that can be derived by harvesting rock lobster. An MLS defines “access” to the stock in terms of sizes of lobster that can be harvested by a sector. Limiting the size of lobster that can be harvested impacts on net benefit and, to a greater or lesser degree, the benefits to an individual sector where the MLS is different between sectors.

54 Non-commercial fisher’s value lobsters across a range of sizes. Some recreational fishers seek to maximise the numbers of lobsters they can take at or above the MLS, while others are more interested in catching large “trophy” lobsters and are therefore prepared to trade off numbers in favour of larger sizes. Likewise, customary fishers from some iwi, hapu or marae traditionally take large lobsters whereas others take smaller lobsters.

55 Rock lobsters provide the commercial sector with significant economic returns. Commercial rock lobster catch had an export value of over \$229 million in the year ending December 2010. From 1 October 2010 to the beginning of June 2011 the average landed rock lobster beach price, across all grades⁶, was \$56 per kilogram. Based on this beach price information the value of the 2010/11 commercial landed catch is estimated to be \$9.2 million in CRA 3, \$4.2 million in CRA 7, and \$57 million in CRA 8.

56 Prices paid for different grades of rock lobster vary within and between seasons according to export market preferences and demands. There are peak times within the season when differentials between grades of lobster can be as high as \$15 - \$18/kg and fishermen will select sizes of lobsters from their catches which maximise the value of their landings.

57 The benefits all sectors realise from rock lobster fisheries are primarily influenced by stock abundance. The management approach used for rock lobster fisheries ensures sufficient lobsters at or above the MLS is available to each sector. However, the size distribution of lobsters and the methods used to harvest them may affect the ability of a sector to catch the fish allocated to it. For example, there may be sufficient lobsters above the recreational MLS to provide for the recreational allocation to be taken and landed. But if

⁶ includes grades: AA (<500g), A (500-600g), B (600-800g), C (800-1000g), D (1.0-1.5kg), E- (1.5-2kg), E+ (2-2.5kg) and F (2.5kg +).

the total number of lobsters above the recreational MLS is low, recreational fishers may not be able to catch the fish using available recreational methods. This “catchability impact” is likely to be exacerbated by decreasing stock abundance.

58 “Catchability” may also be affected by TAC setting. For example, if the TAC is set too high then it is likely the TACC is set too high which may result in increased competition for available catch and prevent recreational fishers from taking their allocation of the TAC.

59 The “catchability impact” can possibly be exacerbated by high-grading.⁷ For example, if the market only wants large lobster, then to the largest extent possible, commercial fishers will high grade for large lobster and leave smaller fish in the water. This may reduce the size range of lobsters at or above the MLS and the “catchability” of lobsters available to the recreational sector.

60 Although there is no research or information to confirm the “catchability impact” in rock lobster fisheries, research in other fisheries and anecdotal information suggests recreational catches fluctuate with varying abundance.

61 Reductions in the benefit able to be obtained by one sector may be acceptable if overall benefit from the fishery is stable or increasing. If the primary management objective is to maximise overall benefit from the fishery then broadly the management focus should be on allowing the sector which values the resource the most to maximise their return from the allowance made for them. Up-to-date comparative valuations between sectors are not currently available for rock lobster fisheries in New Zealand. However, a 1998 study indicated commercial fishers value the New Zealand rock lobster fishery considerably more than recreational fishers, but this finding is highly uncertain.⁸

Options 1A, 2A and 3A – Keep Rock Lobster Concession Area Regulations

Overall Benefits

62 The current rock lobster Concession Area regulations provide the commercial sector with greater flexibility to maximise benefits from the use of the resource. This is because Concession Area MLS's enable commercial fishers to target a wider size range of lobsters and therefore take advantage of variations in the economic value of the different grades for any given TACC. For example, there are more economic options for the commercial sector within a 100 tonne CRA 7 TACC (where a Concession Area MLS applies) than within a 100 tonne CRA 1 TACC (where a 54/60 mm TW MLS regime applies).

⁷ High grading occurs when rock lobsters that are larger than the MLS are returned to a fishery by commercial or recreational fishers in favour of different sized lobsters.

⁸ South Australian Centre for Economic Studies (SACES) (1999). Value of New Zealand Recreational Fishing. Project Report REC9801 prepared for the Ministry of Fisheries.

63 The benefits of a Concession Area to the commercial sector are difficult to quantify. There is no statutory requirement to separately report the weight of concession sized lobsters to the Ministry. Also, the proportion of those lobsters which make up the total commercial catch varies from year to year due to a number of factors including market demands. Industry has lobster size and value information. The CRA 8 industry has supplied the Ministry with some information in the past on the proportion of CRA 8 concession sized lobsters in commercial landings, but similar information has not been supplied to the Ministry for CRA 3 or CRA 7.

64 The different MLS's between sectors do not provide the non-commercial sector with any direct utilisation benefits.

Ministry Compliance Costs

65 A management cost of different rock lobster MLS regimes (between sectors, and within and between areas) is the Ministry's compliance and enforcement costs. However, detailed information is not currently available to quantify the additional Ministry compliance costs associated with the management of different MLS's between sectors and areas.

66 Rock lobster is a high value resource, easily accessible around the country with a latent black market demand. The rock lobster fishery is subject to relatively high levels of compliance risk, particularly poaching, and is a high priority for compliance activities.

67 The Concession Area management framework provides opportunities for otherwise illegal undersized rock lobster to be landed, reported and sold as Concession Area rock lobsters, and illegal undersized rock lobsters harvested by poachers to enter the supply chain by being concealed as legitimate Concession Area lobsters.

68 Types of commercial offences that provide an indication of the opportunity to conceal illegal undersized rock lobster include the following: take or possession of undersized rock lobster for sale, breaches of Concession Area regulations, and misreporting, including 'trucking' into Concession Areas. Instances of these offences by commercial fishers are not common.

69 Understanding and acceptance of the management framework is an important aspect in ensuring voluntary compliance (which can reduce Ministry compliance costs). Concession Areas can create perceptions of inequity, amongst non-commercial sectors in particular, which can result in lack of buy-in to the overall fisheries management framework and can potentially result in an increase in illegal activity. Since the mid-2000's inequity concerns have been expressed by some non-commercial fishers about the CRA 3 and CRA 7 Concession Area MLS regimes, but not CRA 8.

Commercial Costs

70 The Concession Area management framework also imposes costs on commercial users to comply. There are various regulatory requirements relating to the packaging and sale of concession sized rock lobster. The cost of these compliance requirements is incurred by commercial fishers and licensed fish receivers.

71 Cursory analysis of the management framework indicates a number of limitations, weaknesses and inconsistencies with Concession Area regulations. In particular there is a lack of consistency in rules for record-keeping, transportation and disposal of concession sized lobsters. These issues can limit the ability for commercial fishers to maximise benefits from the fishery.

Non-Commercial Costs

72 Specific non-commercial costs of Concession Areas are discussed individually for each stock below.

73 An option to mitigate the current impact of Concession Areas on recreational fishers is to allow recreational fishers access to the Concession Area MLS. This change would reduce perceptions of inequity of access between sectors in these areas but may not increase benefits to recreational fishers (if benefit is driven primarily by harvesting larger size lobsters). Also, allowing recreational fishers to harvest rock lobster at a smaller size than the 54/60 TW MLS that would apply in non-concession areas could increase the Ministry's compliance risk by providing an opportunity for poachers to conceal recreationally caught undersized rock lobster from non-concession areas. While the scale of this offending would be difficult to quantify, the cost of enforcement and monitoring nearly always increases where a disparity between areas is evident.

Options 1B, 2B and 3B – Remove Rock Lobster Concession Area Regulations

Overall Benefits

74 Removing the Concession Area regulations will result in the same male/female 54/60 mm TW MLS regime for commercial and recreational fishers. This is likely to reduce perceptions of inequity held by recreational fishers but may not improve the ability for recreational fishers to obtain benefit from the fisheries due to factors discussed below.

75 There are several management related benefits that may result if the current Concession Area Regulations are removed, although the Ministry considers these benefits relatively minor. These benefits could include:

- reduced Ministry compliance and enforcement costs, and commercial regulatory compliance costs (detailed information is not currently available to quantify the cost savings)

- a potential decrease in illegal take of rock lobster
- increased non-commercial sector buy-in to the rock lobster management regime.

Overall Costs

76 If the Concession Area regulations were removed there would be an immediate direct loss of access to some lobsters for the commercial sector. It is expected that this change in catch availability would be temporary and would return to previous levels once rock lobsters had grown through to the new MLS. However, this may not be the case in CRA 8 where the taking of 'run fish' (migrating lobsters) is an important aspect of the fishery (this is discussed further in the next section under CRA 8).

77 There would also be a secondary opportunity cost for the commercial sector if the current Concession Area regulations were removed. This is because their flexibility to target a wider size range of lobsters and therefore take advantage of variations in the economic value of the different grades would be reduced both now and in the future.

78 Contrary to the views of some non-commercial fishers, removal of Concession Area regulations may not result in preferred size classes and numbers of legal sized lobster being available to non-commercial fishers in popular fishing areas because of varying stock abundance levels and other factors that can influence local variations in lobster numbers (ie, environmental factors, local overfishing and seasonal availability).

Analysis of Individual Concession Area Regulations

The CRA 3 Concession Area

Sustainability

79 The CRA 3 Concession Area regulations do not significantly impact on stock sustainability. The TAC is the principal sustainability control and takes into account the MLS in place.

80 A management procedure is used in CRA 3 to guide TAC setting. Ongoing application of this management procedure is expected to meet the requirements of the New Zealand Harvest Strategy Standard (HSS) and rebuild the stock to a statutory target level as required under section 13 of the Fisheries Act 1996 (the Act) with high probability.

81 If a decision is made to remove the CRA 3 Concession Area, a new management procedure that is cognisant of the changed MLS would be required to guide future TAC setting. An appropriate management procedure option is already available for use. When the current CRA 3 Management Procedure was developed in 2010, rule options were also considered with the Concession Area removed. Timing and the approach to removal would, however, need to have regard to socio-economic impacts (discussed further below).

82 Best available information suggests the CRA 3 Concession Area does not impact on spawning stock abundance. CRA 3 spawning stock abundance is well above 20% of its unfished level with high probability (this level is likely to ensure good levels of future recruitment if environmental conditions are conducive). However, because the CRA 3 Concession Area MLS applies to male lobsters only it is important to consider the size at which 50% of the males are mature in CRA 3. Few studies have looked at male maturity in New Zealand and it is unknown what the size of male maturity is in CRA 3. Information from a study conducted in a marine reserve in the north-east of the country (within the CRA 2 - Bay of Plenty fishery) indicates the approximate size at which 50% of male rock lobsters were mature was 48.1 mm TW. If males matured at a similar size in the nearby CRA 3 fishery this would allow them to mate several times before recruiting to the fishery at 52 mm TW.

Maximising Benefits

83 Concerns have been expressed by some recreational fishery participants (since about 2005) that CRA 3 recreational fishing success is affected by the CRA 3 Concession Area. Some recreational participants suggest recreational catches have declined and available lobsters are of a reduced size. Of the current CRA 3 TAC, 7% of it is allocated to recreational catch, but actual catches are unknown.

84 A decline in availability and size of lobsters is expected as stock size in the fishery has reduced. Information is not available to assess or determine if the recreational sector has experienced a more significant downturn in lobster availability than the other sectors.

85 Analysis of research catch sampling information from the CRA 3 fishery provides an indication of the proportion of male lobsters between 52 and 53.9 mm TW compared to male lobsters at or above 54 mm TW that could have been taken in the CRA 3 fishery each fishing year. This comparison is shown in Figure 2 for the autumn-winter season (1 April to 30 September) and in Figure 3 for the spring-summer season (1 October to 31 March).

86 Commercial catch-per-unit-effort (CPUE) is overlaid in Figures 2 and 3 to provide a relative index of stock abundance. It is important to note Figures 2 and 3 show proportions by numbers, not by weight. Also, the figures do not show the actual proportions of male lobsters landed by commercial fishers; it provides an indication only. The proportions shown can be influenced by commercial fishers high grading to maximise the value of their catch.

87 Figure 2 shows the proportion of male lobsters at or above 54 mm TW in the autumn-winter season declines as stock abundance declines and increases as the stock increases.

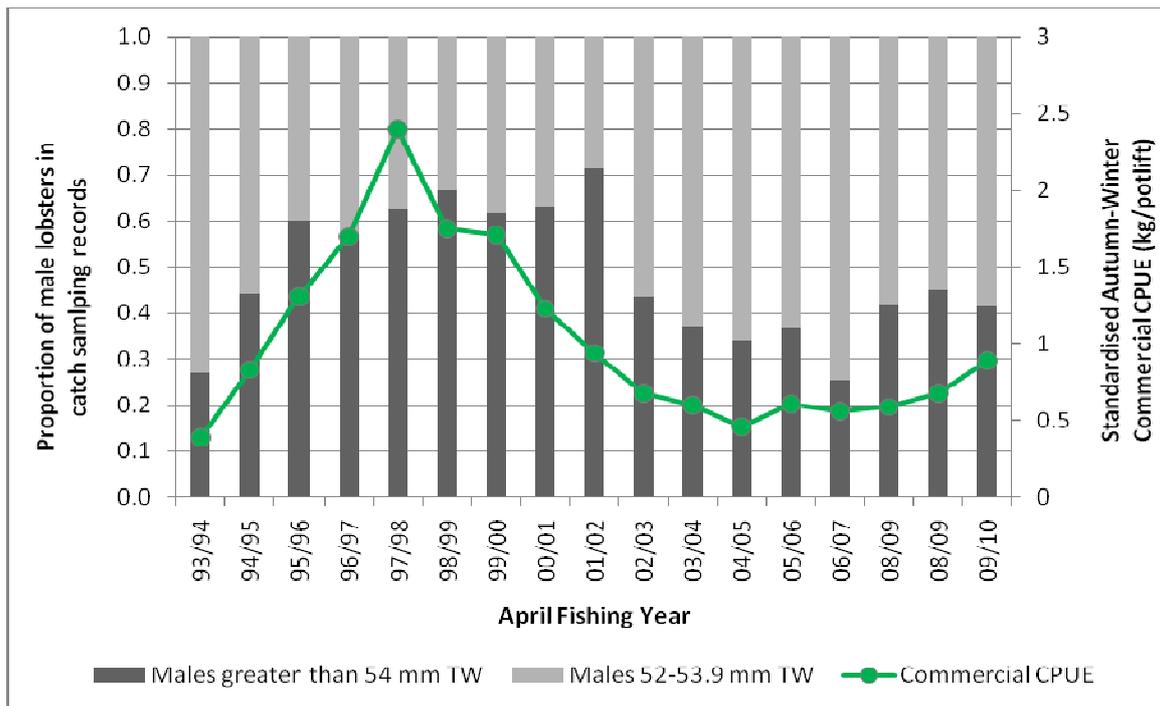


Figure 2: The proportion of male lobsters 52-53.9 mm TW) compared to male lobsters at or above 54 mm TW in the CRA 3 catch sampling records for the autumn-winter season (1 Apr to 30 Sept).

88 Male lobsters are mainly taken by commercial fishers during autumn-winter because females are unavailable for harvesting from late March to mid-September due to being “in berry” (carrying external eggs). It is difficult to quantify the value of the Concession Area MLS to industry. If the Ministry assumes that 50% of the autumn-winter catch comprised male lobsters between 52 and 53.9 mm TW by weight in the 2009/10 fishing year, the value of catch taken from statistical areas 909 and 910 could be worth over \$2 million for the commercial industry (commercial fishers voluntarily do not take male fish between 52 and 53.9 mm TW from the other CRA 3 statistical area, 911).

89 Figure 3 shows the proportion of male lobsters seen in pots in the spring-summer season (note males lobsters between 52 and 53.9 mm TW cannot be taken by commercial fishers during spring-summer). The proportion of males at or above 54 mm TW in recent spring-summer periods are as good or even higher than in spring-summer periods in the peak of stock abundance from 1997 to 1999. This information suggests male lobsters at or above 54 mm TW are available to recreational and commercial fishers during spring-summer.

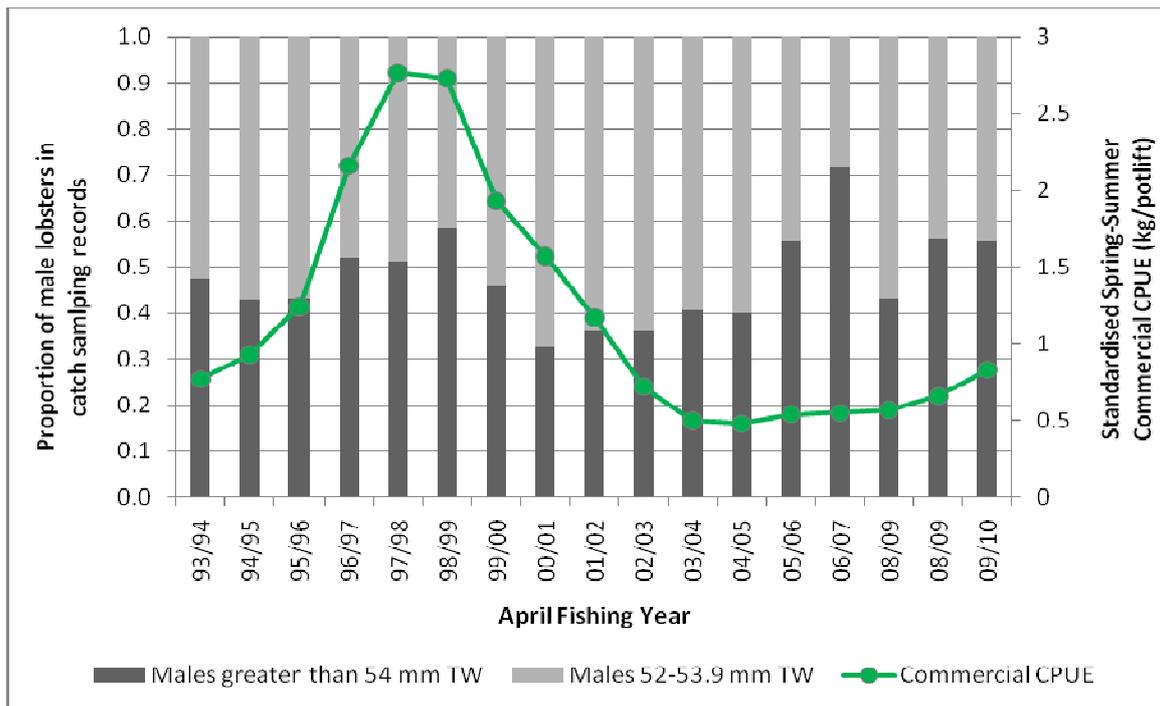


Figure 3: The proportion of male lobsters 52-53.9 mm TW compared to male lobsters at or above 54 mm TW in the CRA 3 catch sampling records for the spring-summer season (1 Oct to 31 Mar).

90 If a decision is made to remove the CRA 3 Concession Area regulations consideration needs to be given to the timing and approach to removal. Consideration will also need to be given to other management measures in the fishery. Removing the concession before the stock has rebuilt to the target may not improve benefits for the recreational sector and may impact on economic returns for the industry.⁹ It may also result in greater competition for legal lobsters by commercial and non-commercial fishers, and cause commercial to rethink some voluntary measures such as the closed season that currently applies in statistical areas 909 and 910 from 1 September to 15 January.

91 Fluctuating stock abundance has been the primary influence on benefits for all sectors in the CRA 3 fishery. Information suggests CRA 3 abundance is increasing and that overall benefit is likely to increase overtime as a consequence.

The CRA 7 Concession Area

Sustainability

92 The CRA 7 Concession Area regulations do not significantly impact on stock sustainability. The TAC is the principal sustainability control and takes into account the MLS in place.

93 A management procedure is used in CRA 7 to guide TAC setting. Ongoing application of this management procedure is expected to meet the requirements of the HSS

⁹ The CPUE associated with the stock target level is a standardised autumn-winter CPUE of 1.14kg/potlift.

and maintain the stock above the statutory target level as required under section 13 of the Act with high probability.

94 If a decision is made to remove the current CRA 7 Concession Area, a new management procedure that is cognisant of the changed MLS would be required to guide future TAC setting. Management procedure evaluations would need to be linked to a new stock assessment for CRA 7 (currently proposed for 2012).

95 Best available information suggests the CRA 7 Concession Area MLS could impact on spawning stock abundance because the size at which 50% of the females are mature in CRA 7 is larger than the MLS. A 1980 study indicated that 50% of female lobsters are mature in Moeraki (within CRA 7) at 118 mm carapace length (the approximate TL equivalent is 71.3 mm). Information is not currently available to determine where current CRA 7 spawning stock abundance is in comparison the stock's un-fished level.

96 Research information also suggests there is no biological justification for the CRA 7 concession MLS today. Lobsters do grow larger than the 54/60 mm TW MLS and tagging information suggests that whilst migration out of the fishery occurs, the average proportion of the population migrating out of the fishery is small.

Maximising Benefits

97 Concerns have been expressed by some recreational fishery participants that recreational fishing success is affected by the CRA 7 Concession Area. Some recreational participants suggest recreational catches have declined and available lobsters are of a reduced size. However, currently there is no quantitative information to confirm this view.

98 Analysis of research catch sampling information from the CRA 7 fishery provides an indication of the proportion of male lobsters 45.6-53.9 mm TW and females 46.9-59.9 mm TW compared to male/female lobsters greater than 54/60 mm TW that could be taken in the CRA 7 fishery each fishing year (refer to Figure 4 below). CPUE is overlaid in Figure 4 to provide a relative index of stock abundance. It is important to note Figure 4 shows proportions by numbers, not by weight. Also, the figure does not show the actual proportions of lobsters landed by commercial fishers; it provides an indication only. The proportions shown can be influenced by commercial fishers high grading to maximise the value of their catch.

99 Figure 4 shows the proportion of male/female lobsters greater than 54/60 mm TW make up a small proportion of the catch sampling records regardless of CPUE. This is consistent with historical observations of the population structure of the CRA 7 fishery. Catch sampling between 1987 and 1989 found the greatest proportion of the population was about the concession MLS with progressively fewer rock lobsters in larger size classes. The Ministry does not have information to quantify the value of the CRA 7 Concession to industry.

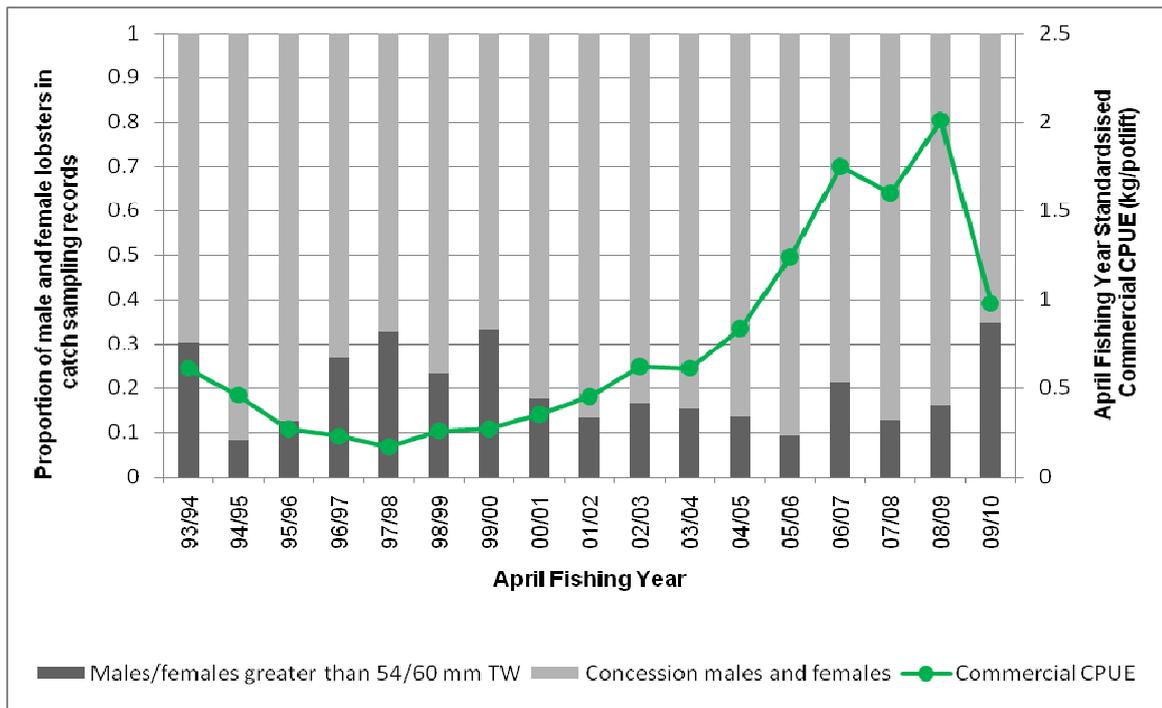


Figure 4: The proportion of concession lobsters (males 45.6-53.9 mm TW and females 46.9-59.9 mm TW) versus male/female lobsters greater than 54/60 mm TW in the CRA 7 catch sampling records by April Fishing Year.

100 The CRA 7 Concession Area MLS may be negatively impacting recreational sector benefits but the extent is difficult to quantify because there is limited information on recreational harvest levels. Of the current CRA 7 TAC, 5% is allocated to recreational catch. This allowance reflects the low participation rates of recreational fishers in the CRA 7 fishery (eg, because of poor weather conditions affecting access to fishing grounds). As in other rock lobster fisheries, the Ministry considers that overall abundance and the TAC are more significant drivers of benefit than MLS's.

101 Any differing impact of the Concession Area on recreational fishers maybe mitigated to some extent through exclusive recreational access to CRA 7 fishing grounds from 20 November to 31 May of any year (the commercial fishery is closed during this time). However, this benefit is not an intentional consequence because the closed season (and also the “buffer zone” – a closed commercial area close to the CRA 8 boundary) was introduced historically for different reasons.

102 If a decision is made to remove the CRA 7 Concession Area regulations consideration needs to be given to the socio-economic impacts of the removal; a staged removal may be most appropriate to minimise socio-economic impacts. The Concession Area MLS is considered to be an important component of the commercial fishery (see Figure 4). Therefore, immediate removal of the Concession Area could result in significant short-medium term socio-economic impacts for commercial sector in CRA 7.

103 Removal of the Concession Area could create greater competition between sectors because the TACC will be taken from a smaller size range of lobsters. It is likely the level of competition will decrease overtime as more lobster recruit to the 54/60 mm TW MLS.

The CRA 8 Concession Area

Sustainability

104 The CRA 8 Concession Area regulations do not significantly impact on stock sustainability. The TAC is the principal sustainability control and takes into account the MLS in place.

105 A management procedure is used in CRA 8 to guide TAC setting. Ongoing application of this management procedure is expected to meet the requirements of the HSS and maintain the stock above the statutory target level as required under section 13 of the Act with high probability.

106 If a decision is made to remove the current CRA 8 Concession Area, a new management procedure that is cognisant of the changed MLS would be required to guide future TAC setting. Management procedure evaluations would need to be linked to a new stock assessment for CRA 8 (currently proposed for 2012).

107 Best available information suggests the CRA 8 Concession MLS could impact on spawning stock abundance. CRA 8 spawning stock abundance is well above 20% of its unfished level with high probability due to the current stock size and the current harvest strategy. However, the size at which 50% of the females are mature in eastern parts of CRA 8 is larger than the MLS. A female MLS of 60 mm TW in CRA 8 could allow more lobster to breed before being vulnerable to the fishery, but the real benefits are difficult to quantify because observed recruitment to a fishery is unlikely to be closely related to the size of the spawning stock because of environmental factors influencing larval and juvenile distribution and survival. No lack of breeding success has so far been observed in the CRA 8 fishery because high catch levels have been sustained over long periods of time.

Maximising Benefits in CRA 8

108 The Ministry suggests the CRA 8 Concession Area does not currently adversely impact on the benefits the non-commercial sector can realise from the use of their allocated share of the TAC. Stock abundance in this fishery has been maintained well above the statutory target level in recent years and there are only low participation rates of non-commercial fishers in the fishery (3% of the current CRA 8 TAC is allocated to recreational catch).

109 The CRA 8 industry advises that in the 2010-11 fishing year, 7-10% (71-102 tonnes) of the total CRA 8 landings were concession sized rock lobster. Based on average beach

prices paid to CRA 8 commercial fishers, the value of the concession sized rock lobster in the 2010-11 fishing year was estimated to be between \$4.0 and \$5.7 million.

110 If a decision is made to remove the CRA 8 Concession Area consideration needs to be given to the socio-economic impacts of the removal. The removal of the CRA 8 concession is unlikely to have any effect on the fishing success of recreational fishers because the fishery is well above the target level. However, the industry indicates the removal of the Concession Area MLS would result in an immediate loss of access to some lobsters in CRA 8, in particular the “run fish” (ie, migrating lobsters).

111 Rock lobster tagging studies in southern New Zealand have shown that “run” rock lobsters migrate over long distances from the east coast to the west coast around the bottom of the South and Stewart Islands. “Run fish” are often identified by the wear on the claws of their legs and are either male or immature females. The CRA 8 fishery consequently has two fisheries, the “resident” rock lobsters that do not migrate over long distances and the “run” rock lobsters.

112 The CRA 8 industry advises the CRA 8 Concession Area MLS enables commercial fishers to target and land some of the immature female “run fish” during a period of strong market demand for lobsters in the particular market grade.

Pre-Consultation

113 From May to July 2011, initial feedback was gathered from sector representatives of the NRLMG on proposals to retain or remove Concession Area regulations in CRA 3, CRA 7 and CRA 8.

114 Initial feedback from commercial representatives to the NRLMG included the following key points:

1. standardising MLS across all nine rock lobster fisheries will not materially improve recreational fishing opportunity – it may well erode that opportunity
2. standardising MLS will not reduce Ministry compliance and enforcement costs. It will reduce costs of compliance with packaging and transportation of lobster out of Concession Areas
3. standardising MLS across all areas will increase research costs because all stock assessment will need to be redone
4. standardising MLS across all areas will impose significant ongoing costs on industry, particularly in CRA 7 and to a lesser extent in CRA 3 and CRA 8
5. standardising MLS across all areas will not materially improve the sustainability of rock lobster stocks around New Zealand. There is no record of any lack of

breeding success in lobster fisheries where differential MLS applies or any other fisheries

6. There is no evidence to support a proposition that 54/60 TW is an optimal MLS regime for New Zealand lobsters fisheries. There is undoubtedly more 'value' to be derived from the fisheries by way of a combination of differential MLS and TAC/TACC.

115 Recreational representatives to the NRLMG expressed concern with the initial analysis of socio-economic impacts of Concession Areas and the time period taken to complete the review. Also, recreational representatives have expressed a strong desire to have size equity between commercial and recreational fishers in all rock lobster fisheries.

116 No initial feedback was received from customary representatives to the NLRMG on the Concession Area review.

Conclusions

117 MLS regimes can influence the benefits that can be derived by harvesting rock lobster. However, the key influence on the benefits all sectors realise from rock lobster fisheries is stock abundance. The current management approach for rock lobster, in particular the stock assessment and TAC setting process, can ensure sustainability regardless of the MLS in place. Concession Areas do not prevent the ability to maintain stock size well above the statutory target level as required under section 13 of the Act (*Bmsy* or an agreed proxy (ie, *Bref*)).

118 Of the three Concession Areas, the CRA 7 and CRA 8 Concession MLS's could impact on spawning stock abundance. The size at which 50% of females are mature in CRA 7 and eastern parts of CRA 8 are larger than the MLS's applying in these fisheries. No lack of breeding success has so far been observed in the CRA 8 fishery because high catch levels have been sustained over long periods of time. Information on the current level of breeding success in CRA 7 is not available.

119 Rock lobster Concession Areas provide benefits to the commercial sector. A flexible MLS regime provides economic benefits to the commercial sector and allows the industry to take advantage of market drivers. Removal of concessions will have an economic impact. The Ministry does not have information to assess the extent of that impact in CRA 7, but it is estimated immediate removal of the CRA 3 Concession Area MLS could potentially result in a \$2 million loss for the CRA 3 industry and up to a \$5.7 million loss for the CRA 8 industry in the first year. The direct losses may be rebuilt over time but there would be a permanent cost relating to the opportunity to sell concession sized lobsters to meet market demands.

120 In some cases, Concession Area MLS's may impact on benefits for the non-commercial sector (eg, the "catchability" of lobsters). The extent of these impacts is uncertain and cannot be quantified with current information, but the absence of, or

uncertainty in, any information should not be used as a reason for postponing or failing to take management action.

121 The impacts of Concession Areas on non-commercial fishers may only be felt, or are exacerbated if overall abundance is low and the availability of legal sized lobsters for the recreational sector is limited. In this situation removal of Concession Areas may provide increased benefits to the recreational sector. However, greater benefit to all sectors could be obtained by rebuilding the fishery rapidly to greater levels of abundance.

122 A further option to mitigate the current impact of Concession Areas on recreational fishers is to allow them access to the Concession Area MLS. This change would reduce perceptions of inequity of access between sectors in these areas but may not increase benefits to recreational fishers (if benefit is driven primarily by harvesting larger size lobsters). Also, allowing recreational fishers to harvest rock lobster at a smaller size than the 54/60 TW MLS that would apply in non-concession areas could increase the Ministry's compliance risk, particularly for poaching (but this is difficult to quantify).

123 Trade-offs are required between maximising the benefit of individual sectors and maximising the net benefit from the fishery depending in which sector(s) value the fishery the most. Determination of the appropriate balance between potentially competing values will need to be made on a case by case basis relative to the impact on net benefit derived from the fishery.

Appendix 1

– History of the CRA 7 Concession Area Regulations

Key changes to the CRA 7 Concession Area regulatory framework are summarised below:

- The Fisheries (General) Regulations 1948 came into force in June 1948 and introduced the Otago concession into the national rock lobster fishery management framework. The Otago concession was defined as that part of the sea lying 1 marine league (3 NM) from the coast of the South Island between the mouth of the Waitaki River and the mouth of the Waipati River (north of Chaseland's Mistake). At the time of establishment, no MLS applied to the take of rock lobster from the Otago concession. The MLS that applied in other management areas in 1948 was 9 inches total length.
- In 1959 amendments were made to the Fisheries (General) Regulations 1950 to introduce a 6 inch total length MLS for the take of rock lobster from the Otago concession.
- In 1963 amendments were made to the Fisheries (General) Regulations 1950 to increase the MLS to 7 inches total length and to reduce the size of the Otago Concession by shifting the northern boundary southwards to Nugget point. The amendment came into force in December 1963 and was part of an 'accommodation' made by the Fishing Industry Committee. In 1962 the Committee recommended the phasing out of the Otago Concession by incrementally increasing the MLS by 1 inch per year until the national MLS of 10 inches (total length) was achieved. The Committee's recommendation was met with resistance from commercial stakeholders, who believed incrementally increasing the MLS would, "...destroy the livelihood of the boats and men involved, and the quantity of rock lobsters landed could not all be disposed of in New Zealand, because the small sized rock lobster were not acceptable to the public outside of Otago."
- The Rock Lobster Regulations 1969 came into force in January 1970. The seaward extent of the Otago concession was increased 8 nautical miles (NM) from the coastline, and the method used to measure rock lobster in the area was changed from 6 inch total length to a "nearly equivalent" 4¼ inch tail length. The measurement method was changed to reflect the national changes in rock lobster MLS measurement from total length to tail length.
- In 1971 amendments were made to the Rock Lobster Regulations 1969 to increase the MLS to 5⅞ inch tail length and to introduce a two year closed area prohibiting the take of rock lobster from that part of sea lying east of the Otago coastline between Nugget Point and Long Point. In 1970-71 the Fishing Industry Committee recommended phasing-out the Otago concession area MLS in two equal increases, the first in 1971 and the second in 1972. The 1971 amendments were to come into force in two parts: (i) the two year closed area from Nugget Point and Long Point (known as the Otago Buffer Zone) in July 1971, and (ii) the increased MLS to 5⅞ inch (tail length) in June 1972. Although the two year closed area came into force in July 1971, subsequent amendments in 1972 revoked the proposed increase in MLS before it came into force in June 1972. In 1972 amendments were made to the Rock Lobster Regulations 1969 to increase the 4¾ inch (tail length) MLS by ½ an inch per year over three years. The outcome of the 1972 amendments was a 5¾ inch tail length MLS for the Otago Concession by 1974.

- In 1973 amendments were made to the Rock Lobster Regulations 1969 to defer the $\frac{1}{2}$ an inch per year (over three years) MLS increase that was proposed. The amendments came into force in June 1973 and replaced the three year timeframe with a revised five year timeframe. The outcome of the 1973 amendments was a $5\frac{3}{4}$ inch tail length MLS for the Otago Concession by 1977.
- In 1974 amendments were made to the Rock Lobster Regulations 1969 to increase the MLS to 5 inches tail length, and to phase out the Otago Concession through incremental $\frac{1}{4}$ inch per year MLS increases over four years. The amendments came into force in July 1974 and replaced the five year timeframe and $\frac{1}{2}$ inch incremental MLS increases. The outcome of the 1974 amendments was a $5\frac{3}{4}$ inch tail length MLS for the Otago Concession by 1977.
- In 1975 and 1976 amendments were made to the Rock Lobster Regulations 1969. The outcome of the 1975 and 1976 amendments was to retain the 5 inch tail length MLS, and extend the expiry of the Otago Concession until 1975 (1975/99 and 1976 (1976/149).
- In 1977 amendments were made to the Rock Lobster Regulations 1969 to change the 5 inch tail length MLS to 127mm tail length, remove the 1976 expiry date from the Otago concession and to introduce a closed area prohibiting the take of rock lobster from that part of sea lying east of Otago coastline between Nugget Point and Long Point.
- The Fisheries (South-East Area Commercial Fishing) Regulations 1986 came into force in October 1986. The Otago Concession area was extended and re-defined as that part of the sea lying seaward of the mean high-water mark between a straight line drawn from the Waitaki River South Head Aero beacon bearing 135 degrees and a straight line drawn from Nugget Point lighthouse bearing 135 and within New Zealand fisheries. The closed area (Otago Buffer Zone) was re-defined as that part of the sea lying seaward of the mean high-water mark between a straight line drawn from the Nugget Point lighthouse bearing 135 degrees and a straight line drawn from Long Point bearing 135.
- In 1993 an amendment was made to the Fisheries (South-East Area Commercial Fishing) Regulations 1986 to shorten the 21 June to 19 December Otago Concession by one month.
- In 1994 amendments were made to the Fisheries (South-East Area Commercial Fishing) Regulations 1986 to remove the 1 June to 19 December timeframe for the closed area (Otago Buffer Zone) and introduce a closed season. The closed season prohibited the take of rock lobster from that part of the sea lying seaward of the mean high-water mark between a straight line drawn from the Waitaki River South Head Aero beacon bearing 135 degrees and a straight line drawn from Nugget Point lighthouse bearing 135 and within New Zealand fisheries waters from 20 November in any year and ending 20 June in the next year.
- In 2009 an amendment was made to the Fisheries (South-East Area Commercial Fishing) Regulations 1986 to shorten the closed season by 19 days. From the 20th day of November (in any year) and ending with the 31st day in May (in the next year) no commercial fishers shall take rock lobster from the Otago concession area.

Appendix 2

– History of the CRA 8 Concession Area Regulations

Key changes to the CRA 8 concession area regulatory framework are summarised below:

- The CRA 8 concession was introduced in 1988 and permitted the take of 152mm total length female rock lobsters during 1 January 1989 and ending 30 April 1989 in the same year. In 1989, the female MLS in other management areas (except CRA 7) was 58mm tail width.
- In 1989 amendments were made to the Fisheries (Southland and Sub-Antarctic Areas Commercial Fishing) Regulations 1986 to replace the existing total length measurement with a tail width measurement, increase the concession timeframe by five months in 1989 and eight months in 1990, and introduce a staged increase in the CRA 8 concession area MLS from 56mm to 57mm over two years from 1989 to 1991.
- In 1991 and 1992 amendments were made to the Fisheries (Southland and Sub-Antarctic Areas Commercial Fishing) Regulations 1986 to extend the Southland Concession by one year to 1992 and 1993 (1992/86), and to retain the 12 month concession timeframe and 57mm tail width MLS for the take of female rock lobsters.
- In 1993 and 1994 amendments were made to the Fisheries (Southland and Sub-Antarctic Areas Commercial Fishing) Regulations 1986 to extend the Southland Concession by one year to 1995 and to 1996, and to retain the 12 month concession timeframe and 57mm tail width MLS for the take of female rock lobsters.
- In 1996 amendments were made to the Fisheries (Southland and Sub-Antarctic Areas Commercial Fishing) Regulations 1986 to remove the 1996 expiry and extend the Southland Concession indefinitely with no set timeframe and to retain the 57mm tail width MLS for the take of female rock lobsters.