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## NZ Sport Fishing Council submission on the review of Rock Lobster sustainability measures for 1 April 2016

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## 1. INTRODUCTION

For some time the New Zealand Sport Fishing Council and supporters of our LegaSea outreach (the submitters) are concerned that current rock lobster management and the National Rock Lobster Management Group (NRLMG) processes show little regard for the public's interests, in environmental and fishing terms, and our social, economic and cultural wellbeings. These interests and wellbeings are largely ignored or passed over with a cursory paragraph or two.

This sense of disengagement is amplified by the truncated submission periods offered to stakeholders by the Ministry and NRLMG. It seems 18 working days is the norm. This timeframe does not allow for adequate consultation, particularly for NGOs such as ours that need to consult with a range of interests and volunteers.

In an effort to alert people to this review and better inform our members and supporters, the Council developed a summary of the proposals. That summary was distributed to clubs, other groups and organisations aligned with LegaSea's Principles, encouraging feedback prior to development of this submission. This submission is richer for having initiated that engagement with others.

While we aspire to have abundant rock lobster populations the models and management advice appear to favour maximum exploitation, especially in areas like CRA 2 where CPUE has continued to decline for the last two years but has failed to trigger a TACC review. In 2015, the CRA 2 standardised CPUE (which includes the weight of any legal fish returned to the sea) was just 0.2991 kg/potlift. The Management Procedure generated a proposed TACC of 199.4 t for 2016, however, as this would be a change of only 0.3% (below the minimum change threshold of 5%). The disappointing result means another year with no change to the 200 tonne TACC and another year where commercial fishers prop up the CPUE by fishing in Eastern Bay of Plenty. If any stock qualifies for an early review of the Management Procedure in 2016-17 it must be the one in the most trouble, CRA 2.

We remind the National Rock Lobster Management Group and the Ministry that the Minister for Primary Industries has a statutory duty to sustainably manage fisheries to maintain the potential of our fisheries resources to meet the reasonably foreseeable needs of future generations, pursuant to s8(2)(a) of the Fisheries Act 1996.

## 2. RECOMMENDATIONS

The Minister addresses the sustainability concerns of non-commercial stakeholders by agreeing to stop the use of Management Procedures based on Catch Per Unit of Effort (CPUE) controls, and to initiate a full review of rock lobster management.

- CRA 4 –
  - The Minister sets a TAC of 615 t for CRA 4.
  - The allowances for recreational and customary fishing interests remain unchanged.
  - The allowances for other sources of fishing mortality remain unchanged.
  - The Minister reduces the TACC to 420 t in CRA 4.
  
- CRA 5 –
  - Before significant changes to the CPUE index can be accepted there must be a clear explanation to the Minister and stakeholders of the rationale and implications of the change.
  - The Minister sets a TAC of 507 t for CRA 5.
  - The Minister makes an allowance of 80 t for recreational interests in CRA 5.
  - The Minister makes an allowance of 40 t for customary fishing interests in CRA 5
  - The Minister makes an allowance of 37 t for other sources of fishing mortality in CRA 5.
  - The Minister sets a TACC of 350 t for CRA 5.

- CRA 8 –
  - Before significant changes to the CPUE index and Management Procedure can be accepted there must be a clear explanation to the Minister and stakeholders of the scientific basis for and implications of the change.
  - The Minister sets a TAC of 1065 t for CRA 8
  - The Minister sets aside 30 t to allow for Maori customary interests in CRA 8.
  - The Minister sets aside 33 t to allow for recreational fishing interests and section 111 take in CRA 8.
  - The Minister sets aside 40 t to allow for fishing related mortality in CRA 8.
  - The Minister retains the current TACC of 962 t in CRA 8.
  
- CRA 9 –
  - The Minister sets a TAC of 101 t for CRA 9
  - The Minister sets aside 20 t to allow for Maori customary interests in CRA 9.
  - The Minister sets aside 30 t to allow for recreational fishing interests in CRA 9.
  - The Minister sets aside 5 t to allow for fishing related mortality in CRA 9.
  - The Minister retains the current TACC of 46 t in CRA 9.

### 3. NZ SPORT FISHING COUNCIL - LEGASEA

1. The New Zealand Sport Fishing Council and our public outreach LegaSea, (the submitters) appreciate the opportunity to submit feedback on the *Discussion Paper No: 2016/05 Review of Rock Lobster Sustainability Measures for 1 April 2016*. The Ministry for Primary Industries (MPI) released their proposals on 14 January 2016, with submissions due by 11 February 2016.
2. The submitters object to the Ministry's tight consultation timetable giving only 18 working days to respond to the complex sustainability measures for selected crayfish stocks. It is unreasonable to expect non-commercial entities to respond with adequate information to inform the Minister's decision, as required by ss 12 and 13 of the Fisheries Act 1996 (the Act).
3. The New Zealand Sport Fishing Council is a National Sports Organisation with over 32,000 affiliated members from 57 clubs nationwide and a growing number of contributing supporters to LegaSea. Our representatives are available to discuss this submission in more detail if required. We look forward to positive outcomes from this review and would like to be kept informed of future developments. Our contact is Dave Lockwood, secretary@nzsportfishing.org.nz.
4. Rock lobster abundance is important for maintaining a diverse ecosystem, providing for the social, economic and cultural wellbeing of our people, and be sustainable to meet the reasonably foreseeable needs of future generations, as per section 8(2)(a & b) of the Act.
5. The submitters are committed to ensuring that sustainability measures and management controls are designed and implemented to achieve the purpose and principles of the Act. A precautionary approach needs to be taken in this highly valued fishery, which is managed using uncertain and incomplete information.
6. The New Zealand Sport Fishing Council is concerned that our members, LegaSea supporters and others nationwide are becoming disillusioned with Management Procedures, which in many areas sustain the current level of depletion of our taonga [treasure], our crayfish.

## 4. EXECUTIVE SUMMARY

7. In 1992 the National Rock Lobster Management Group (NRLMG) was established as a statutory body with representatives from major stakeholder groups to provide advice to the Minister on managing the rock lobster fisheries.
8. In our view it is time to review the NRLMG membership and process. A number of members have been there a long time and developed entrenched positions. It is not clear to us who the recreational representatives are representing as the New Zealand Recreational Fishing Council is no longer a functioning entity.
9. The New Zealand Sport Fishing Council (NZSFC) has raised concerns about the assumptions and risks of CPUE-based Management Procedures in previous submissions and these latest proposals just reinforce our concerns regarding the universal application of this strategy. <http://goo.gl/R4j73C>
10. In 2015, the CRA 2 standardised CPUE (which includes the weight of any legal fish returned to the sea) was just 0.2991 kg/potlift. If any stock qualifies for an early review of the Management Procedure in 2016-17 it must be the one in the most trouble – CRA 2.
11. The submitters support the conservative approach taken by the CRA 4 Rock Lobster Industry Association in asking for 26 tonnes in additional reductions to the Total Allowable Commercial Catch (TACC) in 2016. We are not convinced that commercial Catch Per Unit of Effort (CPUE) tells the whole story regarding trends in stock abundance in CRA 4.
12. The new stock assessment for CRA 5 estimates that in 2015 the spawning stock biomass (mature females) was 78 to 97% of the unfished level. It seems that this highly optimistic outcome is a result of changing the way CPUE is calculated to include the weight of legal rock lobster that are returned to the sea. The rationale and implications of this significant change to the index of abundance in CRA 5 must be properly documented before it can be accepted.
13. The submitters support an increase in the allowance for recreational fishing interests to 80 tonnes, but not the reduction of the allowance for all other mortality to the stock caused by fishing from 37 tonnes to 30 t. The corresponding TAC would be 507 tonnes.
14. The submitters do not support Telson clipping for recreational catch as a means of addressing illegal harvest, however, the Council has used its public media channels to urge the public not to purchase from black market sources and would support further work in this area.
15. There is another new stock assessment with a significant change to the way CRA 8 CPUE index is calculated. This change in approach is directly opposite to the proposed change in CRA 5 as it excludes legal rock lobster recorded by fishers that are returned to the sea. The scientific rationale and implications of the change must be explained before changes can be accepted. The submitters do not support the proposed reduction in allowance for all other mortality to the stock caused by fishing from 28 to 5 tonnes in CRA 8, New Zealand's largest commercial rock lobster fishery.
16. CRA 9 is another fishery where commercial CPUE is not a reliable indicator of relative stock size, but the decline in catch rates are of concern and the submitters support the return of the TACC to 46 tonnes.
17. We submit the Rock lobster Management Procedures are unravelling. Lauded as providing a well tested means of providing for utilisation while ensuring sustainability and certainty for fishers in five-year periods, this year there is no consistency. Commercial fishers want to override the Management Procedures to have larger TACC cuts (CRA 4) or no reduction in TACC (CRA 9), they want CPUE to include discarded crayfish (CRA 5) or without discarded crayfish (CRA 8) and want their Management Procedure to be changed before 5 years is up to minimise changes to the TACC (CRA 5) or allow earlier increases to the TACC (CRA 8).

## 5. ROCK LOBSTER MANAGEMENT

### 5.1. NRLMG advice

18. In 1992 the National Rock Lobster Management Group (NRLMG) was established as a statutory body to provide advice to the Minister on managing the rock lobster fisheries. It is advertised as a multi-stakeholder group comprising representatives of customary, recreational and commercial fishing interests, and the Ministry for Primary Industries (MPI). In reality, sector representatives are limited to Te Ohu Kaimoana (TOKM), NZ Rock Lobster Industry Council (NZ RLIC), past members of the now defunct New Zealand Recreational Fishing Council (NZRFC) and the Environment and Conservation Organisations of Aotearoa New Zealand (ECO).
19. In 2001 it was agreed by the Minister and the NRLMG that the group would “provide well informed, credible, and consistent research and management information and advice to sector groups, Government agencies, and Ministers<sup>1</sup>”. The NRLMG must be held accountable to all stakeholders for achieving this unfulfilled commitment.
20. In our view it is time to review the NRLMG membership and process. A number of members have been there a long time and developed entrenched positions. It is not clear to us who the recreational representatives are representing as the NZRFC is no longer a functioning entity.
21. The Management Procedures, which the NRLMG have staunchly defended and relied on, seem to be unravelling with the CRA5 and CRA8 Procedures being reviewed before they expired due to pressure from commercial fishers. In both cases the old CPUE indices, which were previously “considered to be a reliable indicator of relative stock size in rock lobster fisheries”, are discarded. In CRA4 commercial fishers are promoting a TACC reduction more than double what the Management Procedure produces, and in CRA9 NRLMG consider the CPUE and Management Procedure as unreliable, proposing it can be ignored this year.
22. Changes to Management Procedures are a significant step that needs careful consideration by managers and stakeholders. Once adopted it may not be reviewed for the next five years. There is limited supporting information available in the Discussion Paper and Plenary Report, and an impossibly short consultation period to fully understand the changes made and communicate these to interested members and supporters.
23. We have raised concerns about problems with CPUE-based Management Procedures in previous submissions and these latest proposals just reinforce our concerns regarding the universal application of this strategy. <http://goo.gl/R4j73C>

### 5.2. CPUE as a proxy for abundance

24. Assuming that commercial Catch Per Unit of Effort (CPUE) is proportional to abundance comes with many risks. CPUE is the term for kilo caught or harvested per potlift. Commercial CPUE is often affected by operational changes, discard rates and market demands, but there is no consistent way that these changes are recorded or taken into account.
25. The practice of high grading and returning the less profitable grades to the sea has become widespread. This is allowed under Schedule 6 of the Fisheries Act, but released legal fish are included in the CPUE in some areas and not others. Fisher estimates of the weight of those released crayfish have a significant influence on CPUE in some areas.

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<sup>1</sup> NRLMG 2003 Annual Report.

26. The use of holding pots also complicates the recording of retained catch, which has to be estimated by the fisher each day. At the peak of the season some fishers work a lot of pots or work further afield. Is the fishing effort of a pot lifted every day the same as a pot lifted every 2 or 3 days? No account seems to be taken of these operational changes when assuming that standardised CPUE is proportional to abundance.
27. Another critical assumption is that commercial fishing effort effectively samples the vulnerable biomass. The submitters reject the assumption that CPUE gives an unbiased sample of population abundance, primarily on the grounds that rock lobster have always suffered serial depletion, as the stock is fished down effort is redeployed to pockets of remaining adult stock, as has happened in CRA 2.
28. The rock lobster population is fished at different rates across its range. Areas close to home are often the first to be depleted. As catch rates diminish pots are moved to grounds holding a less heavily fished population, where abundance is greater. When that area is exhausted another move is made, allowing stocks to be serially depleted without any apparent decline in CPUE to highlight changes in stock size.
29. Without knowing what effort is applied to the same area, in the same way, and the catch composition, the changes in raw CPUE data becomes non-attributable.
30. In future, some form of electronic logging of location and catch by potlift would show the extent of shifting effort.

### **5.3. Application of Management Procedures**

31. Management Procedures are a mechanism used to guide catch limit decisions in most rock lobster fisheries. Management Procedures are driven by the annual standardised CPUE from the previous year.
32. Setting and altering the Total Allowable Catches (TACs) based on un-validated fisher-recorded catch, including legal crayfish returned to the sea and number of potlifts, requires a good deal of faith to overcome the possibility that fishers can ignore the high incentive to change their operation to ensure stable or increasing CPUE.
33. For example, a Management Procedure has applied in the CRA2 stock (Hauraki Gulf to East Cape) since 2014. The decision rule was not triggered this year even though CPUE has declined to 0.3kg per potlift. It is reported that CPUE in the northern part of CRA2 is well below 0.25kg/potlift, but because the management area is so large CPUE can be averaged out over the whole area. Managing at a smaller scale would demonstrate the reality of declining abundance in the Hauraki Gulf to Bay of Plenty regions.
34. Fishers have ready access to better boats, better haulers, and pots. Electronic aids such as sounders, sonar, GPS and bottom mapping software are now available. A potlift in 2015 is not directly comparable to a potlift 10, 20 or 35 years ago.
35. The basic understanding of rock lobster settlement, recruitment, growth, migration, natural mortality, and natural variances are mostly missing. A few small pieces have been studied, but the knowledge base is dominated by the unknown, and this alone reinforces the need for the Minister to act in a lawful, precautionary manner when managing rock lobster fisheries.
36. To better understand how the stock is affected by fishing it is critical that we know the numbers of each cohort being taken in commercial crayfish pots. This data is important if we are to have any understanding of population changes and exploitation rate, particularly when no reliable index of rock lobster settlement and recruitment exists.

#### 5.4. MLS and size concessions

37. Tracking changes in the age/size composition of the harvest is essential if the effects of a Minimum Legal Size (MLS) concession are to be understood.
38. Concessions enabling commercial fishers to take rock lobster below the MLS, at 52mm and 53mm, apply in CRA 3 (Gisborne), CRA 7 (Otago) and CRA 8 (Southland).
39. Moreover, we are seriously concerned that commercial fishers, in CRA 3 in particular, are reliant on concession fish. At earlier CRA 3 regional meetings fisheries managers advised that concession fish were estimated to be between 60 and 70% of landed catch.
40. The Minister must insist that information is made available on where, when, and how many concession fish are being harvested. This information is critical to determining whether it is the abundance of these small fish that are skewing the CPUE results. Having validated this information the Minister will then be empowered to make a more informed TAC decision.
41. Without this information we can only guess at the proportion of how many rock lobster below the MLS are contributing to the CPUE.
42. In 2013, 2014 and 2015 the NZSFC requested the following information. We received no response. We repeat our questions with the expectation of receiving answers this year –
  - a. What percentage of fish below the national MLS are landed, per stock?
  - b. Where and when fish below the national MLS are being harvested, per stock?
  - c. What proportion of legal rock lobster catch is returned to the sea?
  - d. What is the trend in high grading over time in each rock lobster fishery?

Management without this supporting information means there is no ability to cross-check the changes observed in CPUE. Validation of such important information enables credible management.

43. Crayfish have very high social, economic and cultural value and it is important for the Minister to insist he receives full and balanced advice, and MPI must provide the Minister with the best information – not just an all-powerful point estimate of standardised average CPUE.

#### 5.6. Recreational catch by commercial fishers

44. There is a high level of catch classed as “recreational” taken by commercial under s111 of the Fisheries Act 1996. This catch is taken during normal commercial fishing and needs to be added on to harvest estimates from recreational fishing surveys.

**Table 1.** The proportion of the recreational allowance taken from commercial fishing operations in 2014-15.

Stock	S111 catch (t) 2014-15	Recreational allowance (t) 2014-15	% of recreational allowance
CRA 4	5.18	85	6.1
CRA 5	6.12	40	15.3
CRA 8	13.85	33	42.0
CRA 9	3.75	30	12.5

## 6. ROCK LOBSTER PROPOSALS

### 6.1. Crayfish 4 (CRA 4) Wellington/Hawkes Bay

Option	TAC	Customary	Recreational	Other mortality	TACC
CRA4_01: Use the <u>current</u> CRA 4 management procedure and decrease the TAC by decreasing the TACC by 4.5 %	641 t ↓	35 t	85 t	75 t	446 t ↓
CRA4_02: Decrease the CRA 4 TAC by decreasing the TACC by 10% (industry proposal subject to endorsement from CRA 4 quota share owners)	615 t ↓	35 t	85 t	75 t	420 t ↓
CRA4_03: Retain the current CRA 4 TAC, allowances and TACC	662 t	35 t	85 t	75 t	467 t

**Table 2:** Summary of Total Allowable Catch, allowances and Total Allowable Commercial Catch proposals for CRA 4.

#### *Points to note*

- Commercial catch rates have dropped about 25% since the stock assessment in 2011. From 1.194 kg per potlift to 0.88 kg per potlift in 2015.
- The Working Group consider that the CRA 4 stock remains above Bmsy and the reference biomass.
- Under the CRA 4 Management Procedure the TACC would be decreased 21 tonnes (4.5%) to 446 t.
- The CRA 4 Rock Lobster Industry Association (CRAMAC 4) consider that the 21 t decrease does not go far enough to ensure the stock is maintained above agreed reference levels. They propose a 47 tonnes (10%) decrease to the TACC.
- The estimated recreational harvest in CRA 4 was 44 tonnes in the 2011–12 National Panel Survey.
- Allowances for recreational and customary catch and other mortality will remain the same.
- A new stock assessment and Management Procedure will be developed in 2016 for consideration next year.

#### **CRA 4 management options**

45. NZSFC supports the conservative approach taken by the CRA 4 Rock Lobster Industry Association. The Management Procedure is a guide and we are not convinced that commercial CPUE tells the whole story regarding trends in stock abundance in most CRA areas.
46. The summer recreational fishery for cray in CRA4 has been adversely affected by easterly winds and periodic heavy swells. Recreational harvest will be down on previous years.

#### **Recommendations for CRA 4:**

- The Minister sets a TAC of 615 t for CRA 4.
- The allowances for recreational and customary fishing interests remain unchanged.
- The allowances for other sources of fishing mortality remain unchanged.
- The Minister reduces the TACC to 420 t in CRA 4.



## 6.2. Crayfish 5 (CRA 5) Canterbury – Marlborough

Option	TAC	Customary	Recreational	Other mortality	TACC
CRA5_01: Use the <u>new</u> CRA 5 management procedure and set the following TAC and allowances, while retaining the TACC	507 t ↑	40 t	87 t ↑	30 t ↓	350 t
CRA5_02: Use the <u>current</u> CRA 5 management procedure and retain the TAC, allowances and TACC	467 t	40 t	40 t	37 t	350 t

**Table 3:** Summary of Total Allowable Catch, allowances and Total Allowable Commercial Catch proposals for CRA 5.

### Points to note

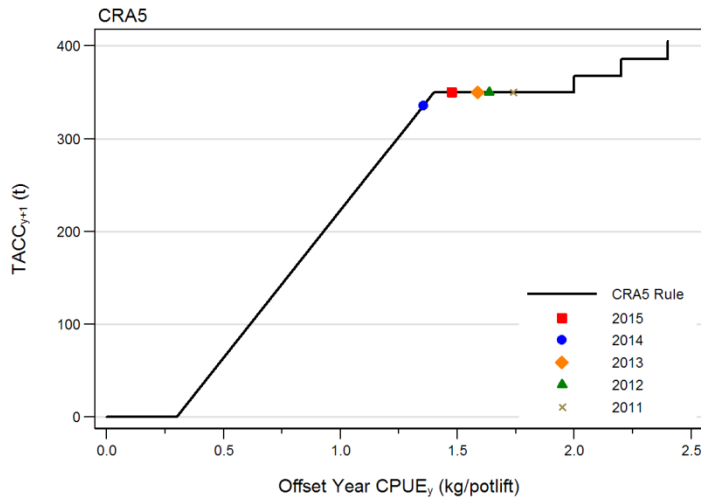
- There is a new stock assessment for CRA 5. It estimates that in 2015 the spawning stock biomass (mature females) was 78 to 97% of the unfished level. Total biomass in 2015 was about 67% of the unfished level. We find these estimates implausibly high relative to virgin biomass in the area 150 years ago.
- Projections using 2014 catch levels and recent recruitments estimate that stock biomass will decline in the next four years by 8 to 10%.
- Feedback from a multi-sector meeting in Blenheim in August 2015 identified common goals that goals to:
  - Maintaining good levels of abundance for all sectors levels of abundance, which is a stock size well above Bmsy;
  - Ensuring sustainability and availability of rock lobsters for all sectors.
- The main difference between the new and current CRA 5 management procedures is in the length of the “plateau”. Under the new procedure the TACC is 350 tonnes between CPUEs of 1.2 and 2.2 kg/potlift, whereas under the current procedure the TACC is 350 tonnes between CPUEs of 1.4 and 2.0 kg/potlift.
- It is proposed that the 40 tonne recreational allowance for CRA 5 is increased to 87 tonnes to reflect new survey information that suggests recreational harvest is more than what has been allowed for in the past.
- In addition, the NRLMG is proposing that additional recreational regulatory measures be consulted upon in different process for implementation in October 2016 to support the ongoing sustainable utilisation of this fishery. These additional measures include the introduction of ‘telson clipping’ and an accumulation limit of 18 rock lobsters (3 daily bag limits) for recreational fishers.
- Frequent monitoring of recreational rock lobster harvest through MPI approved survey methodologies is also proposed.
- The National Panel Survey estimate recreational harvest in CRA 5 at 43 tonnes, however a separate boat ramp survey just in the Motunau and Kaikoura area estimated harvest at 54 tonnes in 2012–13.
- It is proposed that the 37 t allowance for other sources of fishing-related is decreased to 30 t.

### Catch Per Unit of Effort (CPUE)

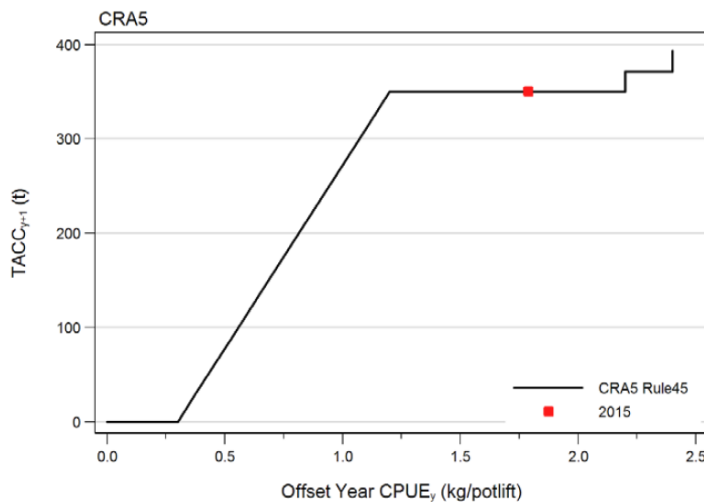
47. There has been a significant change in the way the CPUE is calculated to produce the offset year index of abundance used in the new stock assessment model and new Management Procedure. This change converts the low 2013-14 CPUE of 1.355 kg per potlift, which could have triggered a TACC reduction last year if the current Management Procedure had been applied, in to a much higher value.
48. The new procedure (called F2\_LFX) includes the weight of legal rock lobster returned to the sea. There is no explanation of the effect of the change on the stock assessment or trend in CPUE just a footnote in the Discussion Document (copied below)

<sup>10</sup> The “F2\_LFX” procedure for preparing data for CPUE standardisation is designed to better represent the estimation/landing process than a previous procedure and adjusts for change in data reporting practices.

There is no reference to the change in CPUE or the rationale for the change in the November 2015 Plenary Report which shows the application of the current Management Procedure (Figure 1a) but then includes the F2\_LFX CPUE index in the status of the stock summary. Only information presented in the body of the Plenary Report can be used in the summary table.



**Figure 1a.** The current CRA5 Management Procedure with the 2015 CPUE of 1.478 kg/potlift (red square) calculated using landings only (BL.4 method)



**Figure 1b.** The proposed CRA5 Management Procedure with the 2015 CPUE of 1.789 kg/potlift (red square) calculated using landings and discarded legal catch (F2\_LFX method)

49. So in 2015 the standardised offset year CPUE increases by 21% if legal discards are included. Data collected on the same forms will also increase and should show the same relative trends year on year. But for many years legal discards were not reported so how has the relative shift between form types been allowed for? If no correction was made then the assumption is there were no discards of legal crays due to market forces or fisher preference prior to the change in forms. There needs to be supporting documentation available to show what has been assumed and why, because it will make a significant difference to the recent trend in CPUE.
50. NZSFC has been highlighting the fact that reporting behaviour has a significant effect on CPUE and here is a clear example that the assumptions made will give two different answers.
51. The NRLMG considers that catch rates are a reliable indicator of relative stock size. If the reliable indicator is going to be changed significantly then there must be a clear explanation to the Minister and stakeholders of the rationale and implications before it can be accepted.

- 52. Clearly when viewed together the difference between the BL\_4 and F2\_LFX CPUE for CRA 5 is significant. The shape and values below 1 kg per potlift are very similar in both plots but the trend since 2000 is much more positive in the proposed F2\_LFX data.
- 53. The BL\_4 value in 2014 indicates a stock size about twice what it was in 1980. The F2\_LFX CPUE in 2014 is above estimates for all the years prior to 2009 and indicates a stock size nearly three times what it was in 1980.
- 54. Given the huge implications of the change in CPUE index it is astounding that the Plenary Report still lists the major source of uncertainty in the assessment as the levels of non-commercial catch!

Figure 8.1: The history of CPUE in CRA 5, 1980 – 2014 (offset years).

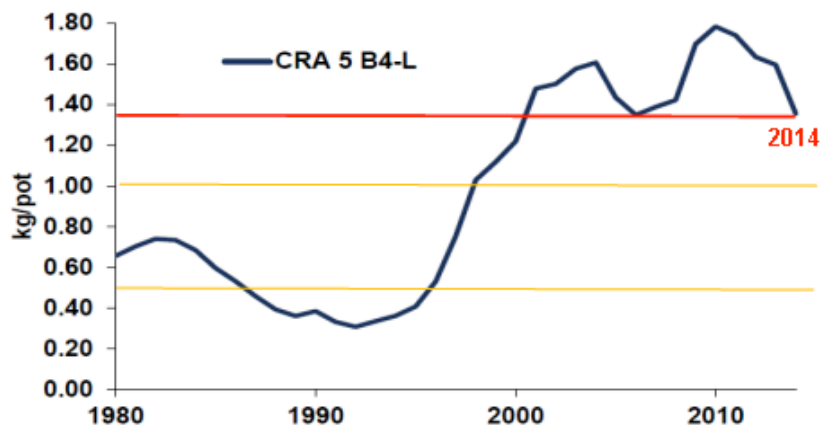


Figure 7.1: The history of CPUE in CRA 5, 1980 – 2015 (offset years) (based on the procedure for preparing data for CPUE standardisation called "F2\_LFX"<sup>10</sup>)

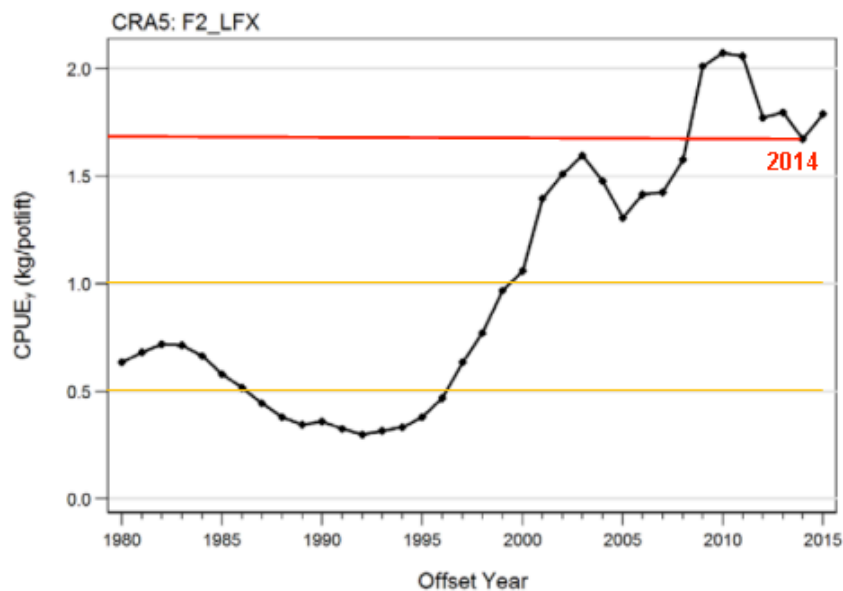


Figure 2. Copies of figure 8.1 from the 2015 Discussion Document and Figure 7.1 from the 2015 Discussion Document.

## CRA 5 management options

55. The new stock assessment model suggests that CRA 5 is well above the reference biomass. It seems that the commercial fishers and stakeholders don't believe the model either, as they have not asked for an increase in catch and in fact extended the plateau in the proposed Management Procedure.
56. The optimistic assessment does make it relatively easy to increase the recreational allowance and increase the TAC. Recreational catch was high, especially in the Kaikoura area during the harvest survey in 2012-13. Recreational fishers report that catch rates have declined since then.
57. The NZSFC is opposed to telson clipping for recreational fishers. It will create a compliance problem for genuine recreational fishers and fisheries officers while having little effect on large scale poachers. If illegal harvest is the problem then any measures need to be directed towards that activity and rock lobster sales. NZSFC has used its public media channels to urge the public not to purchase from black market sources and we would support further work in this area.
58. There is a recreational paua harvest survey underway in the Kaikoura area and some data on rock lobster could be generated. NIWA also have boat ramp interviewers on the main access points in Marlborough Sounds and Tasman Bay. While these surveys are not intended to generate rock lobster harvest estimates they will provide some new data on catch rates and intercept rates with potters and divers for cray. Any new survey of recreational harvest needs to wait until these data are available.
59. NZSFC has seen no evidence that the F2\_LFX is providing a reliable index of abundance, and the 2015 stock assessment based on this index is implausible. The NZSFC considers the proposed Management Procedure will only lock in the status quo TACC for the foreseeable future.
60. Abundance has been reasonable in parts of CRA 5, and although recent recruitment has been poor, a TACC of 350 t, a recreational allowance of 80 t and TAC of 500 t seems reasonable.

### Recommendations for CRA 5:

- Before significant changes to the CPUE index can be accepted there must be a clear explanation to the Minister and stakeholders of the rationale and implications.
- The Minister sets a TAC of 507 t for CRA 5.
- The Minister makes an allowance of 80 t for recreational interests in CRA 5.
- The Minister makes an allowance of 40 t for customary fishing interests in CRA 5
- The Minister makes an allowance of 37 t for other sources of fishing mortality in CRA 5.
- The Minister sets a TACC of 350 t for CRA 5.

## 6.3. Crayfish 8 (CRA8) Southern South Island

Option	TAC	Customary	Recreational	Other mortality	TACC
CRA8_01: Use the <u>new</u> CRA 8 management procedure and set the following TAC and allowances, while retaining the TACC	1030 t ↓	30 t	33 t	5 t ↓	962 t
CRA8_02: Use the <u>current</u> CRA 8 management procedure and retain the TAC, allowances and TACC	1053 t	30 t	33 t	28 t	962 t

**Table 4:** Summary of Total Allowable Catch, allowances and Total Allowable Commercial Catch proposals for CRA8.

### *Points to note*

- There is a new stock assessment for CRA 8. It estimates that in 2015 the spawning stock biomass was 44% of the unfished level. Total biomass in 2015 was about 27% of the unfished level
- With 2014 catch levels, stock biomass is projected to remain near its current level.
- The NRLMG propose a unique way of calculating commercial CPUE in CRA 8. This will not count the estimated weight of cray returned to the sea, which can be “*about 40% by weight of legal rock lobsters brought on board. The CRA 8 industry considered it unrealistic to drive a management procedure with the (F2\_LFX) CPUE based on all rock lobsters brought on board when only a part of the catch is retained.*” This proposed CPUE is called “money-fish CPUE”, “\$CPUE”.
- In 2013 the Minister agreed to use the current CRA 8 Management Procedure to guide TAC setting in the CRA 8 fishery until the 2018-19 fishing year. The stock assessment and Management Procedure evaluations for the CRA 8 fishery were brought forward by two years based on a request from the CRA 8 rock lobster industry to explore greater utilisation opportunities.
- Under the proposed or old Management Procedure the TACC will stay at 962 tonnes. The money-fish CPUE for 2015 is 3.06 kg per pot lift while the CPUE with released cray for 2015 is 3.3 kg per pot lift, just a 7% difference.
- What the new Management Procedure does is reduce the CPUE increase required to generate a TACC increase.
- It is proposed that the 28 tonne allowance for other sources of fishing-related mortality is decreased to 5 tonne.

### **Catch Per Unit of Effort (CPUE)**

61. The NRLMG considers that catch rates are a reliable indicator of relative stock size yet it is able to change, at whim, the CRA 8 CPUE index used based on commercial fishers preference. This change in approach is directly opposite to the proposed change in CRA 5. The scientific rationale and implications of the change must be explained before changes can be accepted.
62. CRA 8 has been a consistently good performing fishery over the last 10 years. Even though CPUE is the highest in the country (3.3 kg per potlift using F2\_LFX) the CRA 8 stock has a low biomass relative to Bzero. Total biomass is estimated to be 27% of the unfished level in 2015.
63. The NRLMG has previously noted that CPUE is not independent of the TACC. If there is a 60 t increase in the TACC then the money fish kept per pot lift could increase even if the stock was stable or declining. In this fishery commercial fishers have the most to lose if the stock size starts to decline. There was a long period when standardised CPUE in CRA 8 was below 1 kg per potlift without a precautionary approach to management it could happen again.
64. The 2016 Discussion Document describes the new Management Procedure (Appendix 5). It appears that CPUE would have to reach about 1.6 kg per potlift to exceed the 5% minimum change threshold before and TACC change would occur (Figure 3). By then, we submit, it could be too late.

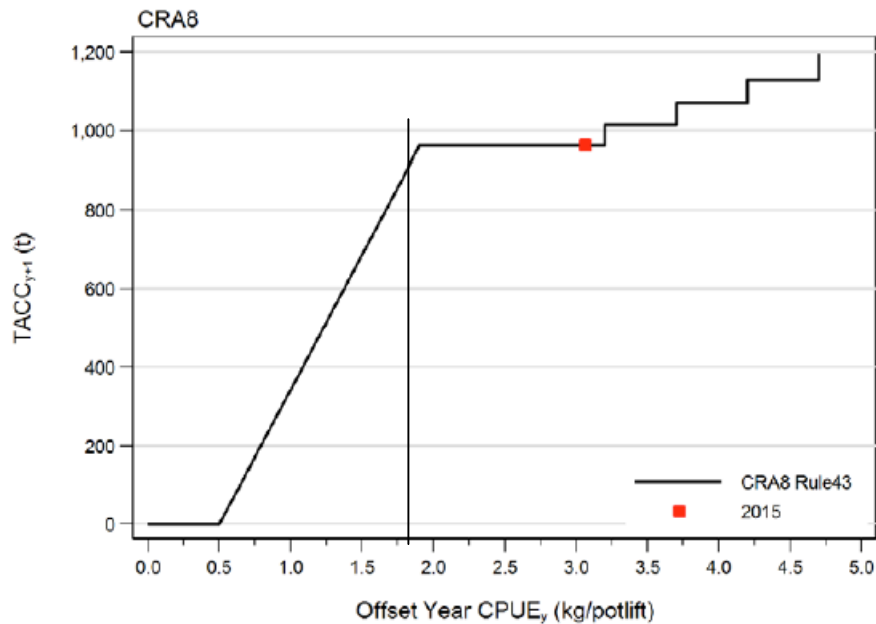


Figure 3. The proposed new Management Procedure for CRA 8 using the new money fish CPUE.

### CRA 8 management options

65. The NRLMG propose to discard the 5 year review period use a unique CPUE method based on money fish and introduce a new Management Procedure to explore greater utilisation opportunities.
66. The CRA 8 may be resilient to these changes but it does highlight for the NZSFC the inconsistency in approach across stocks by the NRLMG.
67. Another example is the puzzling proposal to reduce the allowance for “*All other mortality to that stock caused by fishing*” (s. 21 Fisheries Act 1996) from 28 t to 5 t. The Act does not allow NRLMG to decide that this allowance only covers illegal catch only and not to allow for the mortality associated with discarded legal fish, cray trapped in lost pots, predation of cray in the pot or holding pot etc. In the CRA 8 stock assessment model there is a 10% allowance for discard mortality. That assumption should apply in all CRA fisheries and must be included in the allowance.
68. The NLMG state that the estimated weight of cray returned to the sea can be “*about 40% by weight of legal rock lobsters brought on board*”. Therefore the allowance for discard mortality should be 4% of the landed catch, about 38 t.

### Recommendations for CRA 8:

- The Minister sets a TAC of 1065 t for CRA 8
- The Minister sets aside 30 t to allow for Maori customary interests in CRA 8.
- The Minister sets aside 33 t to allow for recreational fishing interests and section 111 take in CRA 8.
- The Minister sets aside 40 t to allow for illegal harvest in CRA 8.
- The Minister retains the current TACC of 962 t in CRA 8.

## 6.4. Crayfish 9 (CRA 9) Kaipara Harbour – Westland

Option	TAC	Customary	Recreational	Other mortality	TACC
CRA9_01: Use the <u>current</u> CRA 9 management procedure and decrease the TAC and TACC	101 t ↓	20 t	30 t	5 t	46 t ↓
CRA9_02: Retain the current CRA 9 TAC, allowances and TACC	115.8 t	20 t	30 t	5 t	60.8 t

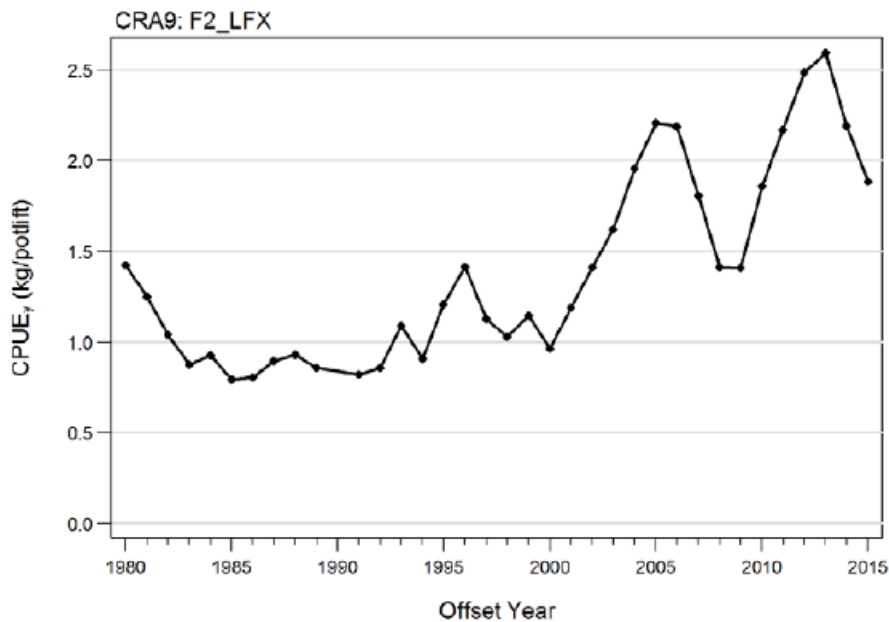
**Table 5:** Summary of Total Allowable Catch, allowances and Total Allowable Commercial Catch proposals for CRA9.

### Points to note

- CRA 9 covers a large area of exposed west coast in the North and South Islands. Commercial effort is not high and weather conditions and access to suitable rocky reef areas may affect CPUE as much, or more than, abundance. Reportedly there are a lot of large crayfish in areas such as Taranaki, good for recreational fishers, but not the preferred target size for commercial fishers.
- The current TAC in CRA 9 is 115.8 tonnes. CRA 9 is considered to be above Bmsy.
- A TACC of 47 tonnes was in place from 1992 to 2014. In 2014 the TACC was increased to 61 t, under the first year of the new Management Procedure with CPUE at an historic high, at over 3 kg per potlift.
- If the Management Procedure was followed in 2015 the TACC would have returned to 46 t. The Ministry's final advise to the Minister recommended that the TAC and remain unchanged at 115.8 tonnes and the TACC remain at 61 t.
- NRLMG note that CPUE could be affected by different catch patterns rather than changes in stock size.
- The 2015 standardised CPUE was 1.885 kg per potlift and the Management Procedure would again drop the TACC by 25%, from 61 to 46 t.
- The current recreational allowance is 30 t, customary allowance 20 t and other mortality 5 t. There is little information in the Discussion Document on the rationale used when setting these allowances and no change is proposed.
- The National Panel Survey estimate for CRA 9 was 18 t in 2011-12.

### Catch Per Unit of Effort (CPUE)

69. The NRLMG is not so sure that catch rates are a reliable indicator of stock size in CRA 9. Catch rates are measured by commercial F2\_LFX CPUE were 1.885 kg per potlift. This is down from 2013 (3.14 kg) and from 2014 (2 kg). An audit of the CRA 9 CPUE concluded that the decline in offset year CPUE in the last two years is real. However, the figures for 2013 and 2014 above from the November 2015 plenary report do not match the CPUE trend plotted in the Discussion Document (Figure 4).
70. We re-submit that commercial CPUE is not a good measure of abundance or the risk to sustainability in this fish stock.
71. Large rock lobster caught and release are included in the standardised F2\_LFX CPUE. A healthy fish stock has a reasonable number of large adult fish. Large crayfish are prime breeding stock and can play an important role in the ecosystem. It is encouraging that CRA 9 still has reasonable numbers of large crayfish.



**Figure 4.** The history of CPUE in CRA 9, 1980 – 2015 (offset years) (based on the procedure for preparing data for CPUE standardisation called F2\_LFX).

### **CRA 9 management options**

72. The current TAC in CRA 9 is 115.8 tonnes. The NRLMG propose two options CRA9\_01 and 02. CRA9\_01 applies the Management Procedure to decrease the TAC and TACC. CRA9\_02 retains the status quo. Neither option would change the existing allowances for non-commercial fishing and other sources of fishing related mortality.
73. Under option 01 the TAC would be decreased by 13%, from 116 to 101 t and TACC would be decreased by 24%, from 61 to 46 tonnes.
74. The NRLMG note that CRA9\_01, “will decrease the current utilisation benefit of the fishery. How the reduction is shared amongst the fishery sectors will depend on allocation decisions”. Another interesting comment.
75. We submit that commercial interests reaped all the benefits from the TAC and TACC increase in 2014 and the retention of the higher TACC in 2015. Given that the fishery requires catch reductions those reductions must be attributed to the commercial sector.
76. We submit these Rock lobster Management Procedures are unravelling. Lauded as providing a well tested means of providing for utilisation while ensuring sustainability and certainty for fishers in five-year periods, this year there is no consistency. Commercial fishers want to override the Management Procedures to have larger TACC cuts (CRA 4) or no reduction in TACC (CRA 9), they want CPUE to include discarded crayfish (CRA 5) or without discarded crayfish (CRA 8) and want their Management Procedure to be change before 5 years is up to minimise changes to the TACC (CRA 5) or allow earlier increases to the TACC (CRA 8).

### **Recommendations for CRA 9:**

- The Minister sets a TAC of 101 t for CRA 9
- The Minister sets aside 20 t to allow for Maori customary interests in CRA 9.
- The Minister sets aside 30 t to allow for recreational fishing interests in CRA 9.
- The Minister sets aside 5 t to allow for illegal harvest in CRA 9.
- The Minister retains the current TACC of 46 t in CRA 9.



## 7. PREVIOUS NZSFC SUBMISSIONS

The New Zealand Sport Fishing Council maintains an online record of our rock lobster submissions, Ministry proposals and the Ministers decisions.

2016 – Submission on the review of Rock Lobster [sustainably measures for 1 April 2016](#).

2015 – Submission on the review of Rock Lobster [sustainably measures for 1 April 2015](#).

2014 – Submission on the review of Rock Lobster [sustainability measures for 1 April 2014](#).

2013 – Submission on the review of Rock Lobster [sustainability measures for 1 April 2013](#).

2012 – Submission on the review of [Rock Lobster regulatory controls](#).

2012 – Submission on the review of Rock Lobster [sustainability measures for 1 April 2012](#).

2011 – Submission on the review of Rock Lobster [commercial Concession Area Regulations](#)

2011 – Submission on the review of Rock Lobster [sustainability measures for 1 April 2011](#)

2010 – Submission on the review of sustainability measures for [CRA 3 & 4 for 1 April 2010](#).

2010 – NZSFC Zone 5 clubs submission on the review of [CRA sustainability measures for 1 April 2010](#).