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NZ Sport Fishing Council submission on the Review of Rock Lobster sustainability measures for 1 April 2012

NZ Sport Fishing Council

1. The New Zealand Sport Fishing Council appreciates the opportunity to submit to the Ministry of Agriculture and Forestry (MAF) on the National Rock Lobster Management Group (NRLMG) initial advice papers for CRA 3, 4, 5, & 7.
2. NZSFC representatives are available to discuss this submission in more detail if required. We look forward to positive outcomes from this review and would like to be kept informed of future developments. Our contact is Roz Nelson, secretary@nzsportfishing.org.nz.
3. The NZ Sport Fishing Council is a national sports organisation with over 32,000 affiliated members from 59 clubs nationwide.
4. NZSFC compile and publish the New Zealand records for fish caught in saltwater by recreational anglers. NZSFC is affiliated to the International Game Fish Association (IGFA), which records and publishes catches that qualify as recreational world records.
5. In 1996 the NZSFC helped establish the NZ Marine Research Foundation, which aims to sponsor research on marine species and fisheries for the benefit of all New Zealanders, including participants in ocean recreation.
6. Many of our established clubs have a focus on fishing for large pelagic species such as marlin, tuna, and sharks. In recent years our membership has expanded to include many local clubs targeting inshore species.
7. The Rock Lobster fisheries are highly prized for their ecological, social, economic and cultural value. The New Zealand Sport Fishing Council is committed to ensuring the Rock Lobster fisheries are managed conservatively, in the national interest and are sufficiently abundant to provide for our current and future generations' needs.

The Proposals

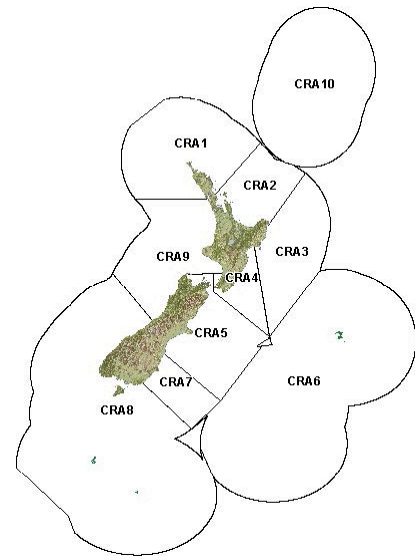
8. The National Rock Lobster Management Group is consulting on their advice to the Minister on the management of some Rock Lobster stocks prior to the start of the 2012-13 fishing year on 1 April.
9. The NRLMG propose that the Total Allowable Catch (TAC) and allowances for CRA 3 (Gisborne) and CRA 7 (Otago) Rock Lobster fisheries are varied for the 2012-13 fishing year, beginning 1 April 2012. The changes are based on the operation of a previously used Management Procedure for CRA 3, and a new Management Procedure for CRA 7 (Table 1).
10. A new TAC setting approach is proposed for CRA 4 (Wellington/Hawkes Bay) and CRA 5 (Marlborough/Canterbury) Rock Lobster fisheries this year. However, it is proposed that the current CRA 4 and CRA 5 TAC and allowances be retained (Table 1).

Table 1: Proposed Rock Lobster management for four areas in 2012-13.

Stock	Option	TAC	TACC	Customary Allowance	Recreational Allowance	Other mortality
CRA 3	Option 1: Be guided by the CRA 3 Management Procedure and increase the TAC and TACC	322.3 tonnes	193.3 tonnes	20 tonnes	20 tonnes	89 tonnes
	Option 2: Retain the current CRA 3 TAC and allowances	293 tonnes	164 tonnes	20 tonnes	20 tonnes	89 tonnes
CRA 4	Option 3: Be guided by the recommended <u>new</u> CRA 4 Management Procedure and retain the current TAC and allowances	661.9 tonnes	466.9 Tonnes	35 tonnes	85 tonnes	75 tonnes
	Option 4: Retain the current CRA 4 TAC and allowances	661.9 tonnes	466.9 tonnes	35 tonnes	85 tonnes	75 tonnes
CRA 5	Option 5: Be guided by the recommended <u>new</u> CRA 5 Management Procedure and retain the current TAC and allowances	467 tonnes	350 tonnes	40 tonnes	40 tonnes	37 tonnes
	Option 6: Retain the current CRA 5 TAC and allowances	467 tonnes	350 tonnes	40 tonnes	40 tonnes	37 tonnes
CRA 7	Option 7: Be guided by the CRA 7 Management Procedure, and decrease the TAC and TACC	83.9 tonnes	63.9 tonnes	10 tonnes	5 tonnes	5 tonnes
	Option 8: Retain the current CRA 7 TAC and allowances	95.7 tonnes	75.7 tonnes	10 tonnes	5 tonnes	5 tonnes

Executive Summary

11. The New Zealand Sport Fishing Council has serious concerns that not all of the Rock Lobster fish stocks are being managed in the long-term national interest - to provide for all New Zealanders' social, economic and cultural well-being. Instead, priority is being given to the short-term interests of a few investors in Rock Lobster quota.
12. In almost all cases the use of Management Procedures is granting unwarranted Total Allowable Commercial Catch (TACC) increases as soon as they are introduced. Catch Per Unit of Effort increases sharply, triggering TACC increases.
13. Given the unreliability of Catch Per Unit of Effort (CPUE) Management Procedures are contrived formulae that have enabled short-term increases in commercial catch without confirming increases in the actual fishable stock.
14. There is no current catch sampling data included in the advice papers to describe both changes in population age structure and to monitor risks of growth and recruitment overfishing.
15. There is insufficient data collected on recruitment, with a handful of rather ad hoc puerulus collectors used. Improved data on recruitment and age structure would better inform on how catches are altering the population and allow some risk assessment.
16. Having more reliable information would enable the Minister to meet his statutory obligations as per the Purpose and Principles (ss8 to 10) of the Fisheries Act 1996 (the Act) - to take a precautionary management approach and provide sufficient abundance to enable people to provide for their well-beings.
17. The New Zealand Sport Fishing Council endorses the submission from the Gisborne-Tatapouri Sports Fishing Club to retain the TACC at 164 tonnes, and acknowledges the years of effort, time and money contributed by club members to ensure the fishery rebuilds to a level that supports local needs. Despite their effort the CRA 3 fishery has and is not being managed according to the Act. This has caused ongoing and unnecessary conflict between the various interest groups.
18. The commercial concession in CRA 3 must be removed to enable the fishery to rebuild to healthy levels, and provide sufficient abundance to enable people to provide for their social, economic and cultural well-being.
19. In CRA 3 the New Zealand Sport Fishing Council supports option 2 - the retention of current TAC and TACC to:
 - a. Ensure that the 2010-11 CPUE is not a one-off spike as seen in other management areas when a Management Procedure is introduced; and
 - b. Allow time for the true catch rate in the absence of the concession to take undersized Rock Lobster to be determined.



20. If a Management Procedure is to be applied in CRA 4 then the New Zealand Sport Fishing Council supports Option 3, to:
 - c. Implement the recommended new Management Procedure in CRA 4, being a more conservative than the last Procedure; and
 - d. Retain the current TACC and allowances for 2012-13.
21. CRA 5 is stable and needs no intervention. The New Zealand Sport Fishing Council supports Option 6 - to retain the current TACC and allowances with the introduction of catch sampling and periodic stock assessments.
22. CRA 7 must fall into line with a national standard for minimum legal size that is determined by the need to provide for the ecological well-being of the species, and having regard to loss in yield by the ongoing harvest of small and young lobster by commercial fishers, enabled by a concession. The NRLMG provides no analysis or advice on what the TAC ought to be in the absence of the commercial size concession. This information is required before setting the TAC in CRA 7 for 2012-13.

Submission

Management Procedures

23. The Management Procedures adopted rely on the belief that changes Catch Per Unit of Effort (CPUE) index accurately reflect changes in abundance. Changes in the CPUE index triggers pre-determined adjustments to the Total Allowable Catch (TAC), all of which tends to be (conveniently) added or subtracted from the Total Allowable Commercial Catch (TACC).
24. The efficacy of the Management Procedure to alter catches and direct stock abundance to target levels is completely dependent upon the ability of the Catch Per Unit of Effort index to predict what abundance will be in a future fishing year. Some initial comments are offered in the Initial Advice Paper in respect of the problems of using CPUE as an abundance index, however these barely broach the subject and are incomplete.
25. It is of serious concern that the models used to assess Rock Lobster show extreme sensitivity to commercial Catch Per Unit of Effort and little else. How well any Management Procedure can manage populations to stock targets is completely reliant on whether the calculated CPUE index reliably tracks changes in abundance. Little else matters in the models used.
26. It seems that as soon as commercial fishers known that catch entitlements are determined by the Catch Per Unit Effort data submitted on their Catch Effort and Landing Returns forms, there is a miraculous increase in CPUE. In one of the most stressed fisheries (CRA 3) CPUE doubled in the first two years. Does that mean that stock abundance doubled? It appears nothing comes close to building stock size like a Management Procedure!

After reviewing the data it is patently obvious that Catch Per Unit of Effort rises sharply in almost all cases once a Management Procedure is accepted (Figure 1).

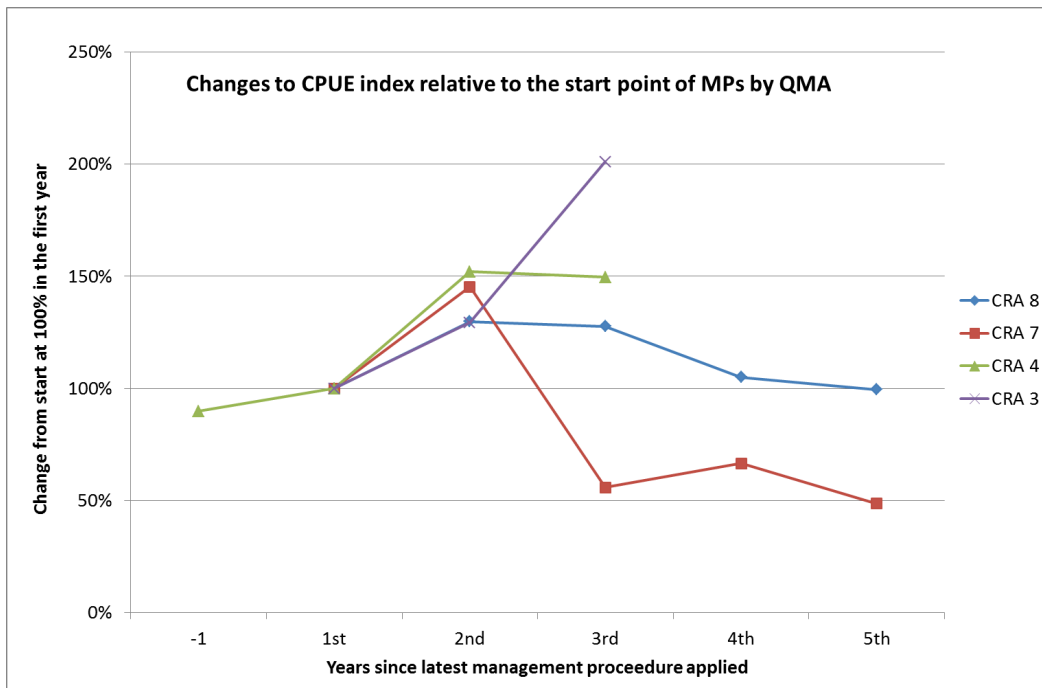


Figure 1: Percent changes in rock lobster CPUE index since the stock started using a management procedure. The 1st year is the year of introduction the 2nd year is when the Management Procedure is applied to CPUE.

27. Some Management Procedures limit the amount of change in a single year, but overall the changes in TACC have a significant increase in the 1st or 2nd year (Figure 2).

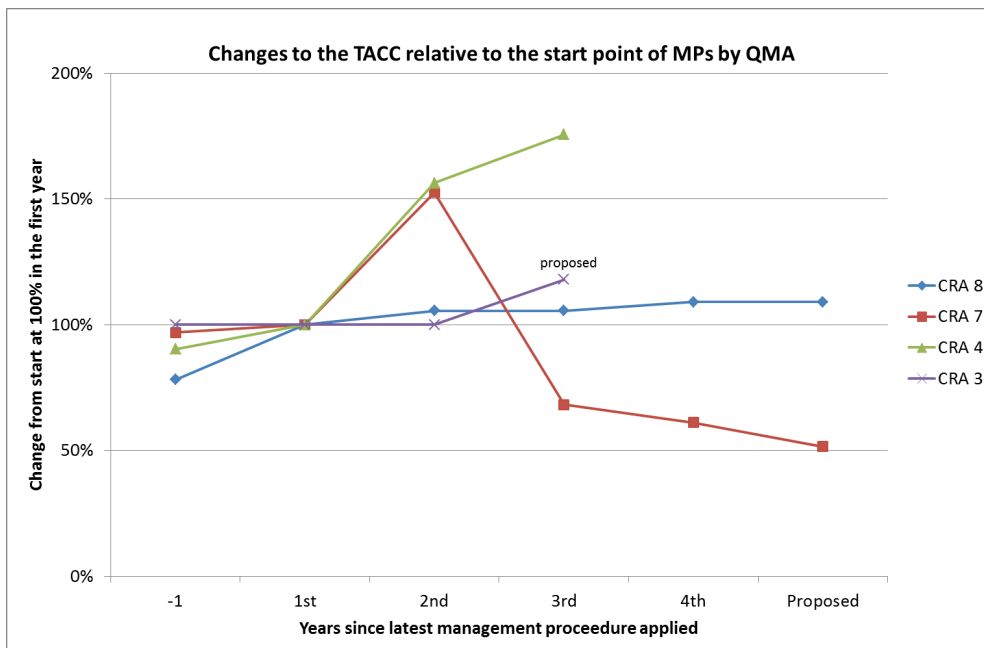


Figure 2: Percent changes in Rock Lobster Total Allowable Commercial Catch since the implementation of a Management Procedure. Year -1 is the year prior to the introduction of the Management Procedure.

28. Any and all matters that will make measurable changes to Catch Per Unit of Effort, that are not caused by changes in abundance, need examining. These will include price/season/size differentials, weather, and bait.
29. Annual Catch Entitlement (ACE) trading dynamics may also cause CPUE indexes to change (particularly with the offset year). The effect of potentially applying a Management Procedure needs particular examination.
30. The New Zealand Sport Fishing Council is concerned that relying on high exploitation rates of new recruits is a very high-risk strategy, and when the inevitable series of low recruitment years arrives the stock risks collapse. This is an unacceptably risky management approach and certainly one we would consider outside of the bounds of the precautionary approach required by the Purpose and Principles of the Fisheries Act 1996.
31. The most powerful data missing is comprehensive catch sampling, of a type initially undertaken in the log book programmes in CRA 1 (Northland E & W) and CRA 2 (Mid north to East Cape). Recording tail width, number, weight, sex, maturity etc is necessary before Catch Per Unit of Effort data can be meaningfully interpreted. Gross weight per pot lift alone provides insufficient information to describe vulnerable biomass, or infer changes.
32. The increasing seasonal and size price differential is a strong incentive to catch before the end of September (includes the period when females are carrying eggs). No detailed and ongoing analysis of catch sampling is offered to validate the assumption that length frequencies don't change.

Stock reviews

CRA 3

33. CRA 3 has become a source of intense conflict, particularly around the Gisborne area with insufficient abundance to provide for public well-being. Commercial interests are unwilling to alter fishing effort close to population centers, preferring to claim pre-emptive rights.
34. Rock Lobster can be caught anywhere within a QMA, except special exclusion areas. Public fishing effort is less mobile, and needs to be provided for much closer to settlements. With 20 years of poor management the CRA 3 stock is highly unstable and abundance has been poor, particularly in the central area around Gisborne that is fished by the public.
35. Using a Management Procedure to set the Total Allowable Catch (TAC) completely ignores the statutory need, as identified by the Supreme Court¹, of making a reasonable allowance for public fishing, by just imagining a simple catch history relationship exists between commercial CPUE and recreational well-being.
36. To even begin TAC discussions without first settling the matter of commercial concessions to minimum legal size laws for a selected minority of fishers confounds the review. The available yields from the fishery are greatly altered by the age at capture.
37. Current catch is half of 10 years ago, and current CPUE is midway between the highs and lows of the last decade, which swung through 300% changes. This fishery is extremely unstable and exhibiting all the signs of growth overfishing. To suggest increased catches, by whatever rationalisation, is reckless.

¹ Kahawai Legal Challenge, NZRFC INC AND ANOR v SANFORD LIMITED AND ORS SC 40/2008 [28 May 2009]

38. The CRA 3 stock needs rebuilding to a point that abundance is sufficient to enable the public to provide for their social and cultural well-being, by having access to Rock Lobster in the areas where they fish.
39. While commercial fishers claim a doubling in CPUE in two years (0.8 to 1.6 kg per pot lift) there is no data presented on the plausibility of these claims or where this increase is coming from. If it is new recruits to the fishery the size concession for commercial fishers means they can access these fish before recreational fishers.
40. While the increase in commercial TAC proposed in 2012-13 is up to the 10% limit specified in the Management Procedure, the NRLMG majority advice (without recreational fishers support) is to apply the entire increase to the commercial sector. This gives a significant 18% increase over the current TACC. This increase must not be applied this year.
41. The Minister must also be advised of the implications of applying this Management Procedure again in 2013-14. If the commercial CPUE remains the same (or even if it drops by 16%) it will trigger the maximum 10% increase in TAC. If the NRLMG retains their majority view to apply all this increase to the TACC it will then reach 225.5 t, which is a 38% increase in two years!
42. There are significant financial incentives for commercial fishers to understate the number of pot lifts and maintain high CPUE in the short term. There is no observer coverage or other validation of actual catch rates. NZSFC submit that a 100% increase in abundance claimed in this fishery does not match the experience of recreational fishers and is biologically implausible, particularly in this fishery, which has been below its original biological reference point (Bref) for years.
43. The NRLMG also state that no allowance has been made in this advice for changes in catch (selectivity) when the concession for commercial fishers to take undersized rock lobster is removed. NZSFC submit that the removal of the concession is overdue and this should occur in 2012.
44. NZSFC supports the proposed option 2 for CRA 3 - the retention of the current TAC and TACC to:
 - e. Ensure that the 2010-11 CPUE is not a one-off spike, as seen in other QMAs when a Management Procedure is introduced; and
 - f. Allow time for the true catch rate in the absence of the concession to take undersized Rock Lobster to be determined.

CRA 4

45. CRA 4 is another unstable stock showing wild swings in Catch Per Unit of Effort and catch. Periods of voluntary shelving of Annual Catch Entitlement (ACE), and large TACC reductions are the recent dynamics.
46. There have been significant increases in the CRA 4 TACC in recent years (Figure 2). Sudden annual TAC changes responding to CPUE change is unhelpful in building a stable stock.
47. The NZSFC supports the change in Management Procedure in CRA 4 as the large step will help rebuild this stock which has been in trouble for a while (Figure 3). This is a much more conservative approach than the last model which allowed TACC increases of up to 75% in a single year.

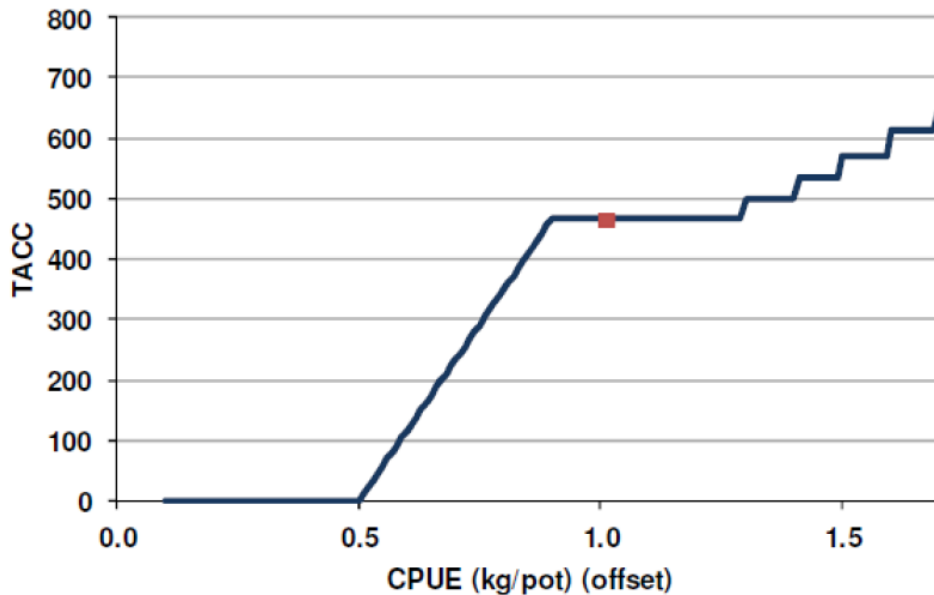


Figure 3: The new shape of the CRA 4 Management Procedure proposed by NRLMG, showing how the TACC will change in response to CPUE changes and the proposed value for the 2012-13 year (square).

48. In addition, catch sampling should be required to monitor changes in age structure, especially when sudden large changes occur in CPUE. If the vulnerable biomass is suddenly increasing then it is either through recruitment, migration, or a combination. There is no information provided to draw any conclusion.

CRA5

49. CRA 5 is stable and needs no intervention. The proposal to adopt a Management Procedure does nothing more than disrupt the stability in this fishery, by the spectre of sudden increases in TACC as seen in other areas.
50. We note that the proposed Management Procedure is very similar to the one rejected in 2010 by the Minister, but in the current proposal the TACC is increased at 2.0 kg/pot lift rather than the previous 2.4 kg/pot lift.
51. The ITQ shareholders may be attracted to the notion of fishing the stock further down for short-term immediate profit, but the instability arising from these strategies is borne by other sectors.
52. It is in the national interest to have stable and abundant Rock Lobster stocks providing optimum yield. This is a much better goal than seeking theoretical maximum catches based on contrived formulae.

CRA 7

53. CRA 7 is a national disgrace; a fishery built on the harvest of immature fish for an aspirational canning venture. Toothpick Lobster.
54. CRA 7 must fall into line with a national standard for minimum legal size that is determined by the need to provide for the ecological well-being of the species, and having regard to loss in yield by harvesting small and young lobster through the application of a commercial concession.

55. Preoccupation with a CPUE-driven Management Procedure is poor management and similarly as aspirational as the canning venture. A return to the fundamentals is overdue, and the National Rock Lobster Management Group exposes itself to charges of serving a small number of ITQ shareholders at the expense of the national interest.
56. It is a legal requirement of sustainable management for the Minister to be provided with the ‘best available information’, as per s10 of the Fisheries Act 1996. There needs to be a long time-series of catch sampling that describes the CRA 7 fishery and records the changes in size and abundance experienced over the last couple of decades. Without this data it is not possible to manage this fishery sustainably or make TAC recommendations.

General concerns about assessment methods

57. After reviewing the Rock Lobster Plenary document it is not clear why a single method and standard for assessing Rock Lobster abundance has not been adopted. Surely the same data should be gathered for each stock and interpreted and used in a similar fashion – after all, it is the same species.
58. The Plenary Report reveals an absence of stock targets and objectives and assessment methods chosen for each area to achieve the National Rock Lobster Management Group’s desired outcome.

CPUE variability and stability

59. The Catch Per Unit of Effort data gathered from the commercial Catch Effort and Landing Returns (CELR) forms are groomed beyond recognition in efforts to draw a direct relationship between CPUE and abundance. Rather than spend endless effort trying to make this data describe something it doesn’t, it would be more beneficial to examine the raw trends in pot lifts and catch in each stock. Doing this will enable us to quickly identify instability.

60. Change over the last decade

Stock	Pot lifts	CPUE	Range	Catch	Estimate
CRA1	-30%	11.6%	57%	+4%	Stable
CRA2	+30%	-44.6%	180%	Same	Unstable
CRA3	-8%	-15.8%	160%	-50%	Unstable
CRA4	-43%	-17.5%	75%	-57%	Unstable
CRA5	-30%	23%	37%	Same	Unstable
CRA6	-7%	29.7%	39%	+6%	Stable
CRA7	-47%	97%	474%	+143%	Unstable
CRA8	-61%	314%	340%	+44%	Stable
CRA9	-47%	35%	220%	Same	Stable

61. Adopting the Management Procedure regimes promoted by National Rock Lobster Management Group will not stabilise the stocks experiencing wide variations in catch or Catch Per Unit of Effort. These unstable stocks need fine-scale catch sampling to better understand the source of the instability.
62. The New Zealand Sport Fishing Council is concerned that the heavy exploitation of Rock Lobster has caused the population to decline to a level where there is a dependence on new recruits to maintain catch. This is unacceptable. The Minister must be advised that the priority and resources need to be focused on increasing the standing stock.

63. It is in the national and public's broader interests to have stable stocks with a good range of age classes present.
64. Fishing stocks down to a population that gives catches of predominately new recruits has unacceptable costs in yield and fishing opportunity.
65. The New Zealand Sport Fishing Council submits for the Rock Lobster fisheries that the failure to gather catch at age data and update the stock model with stock/recruit relationship strips the current stock modelling of validity and usefulness when advising the Minister. This data must be gathered to enable sustainable management of our Rock Lobster fisheries.