

## Review of Rock Lobster Regulations

### A summary of proposals for the New Zealand Sport Fishing Council

Fisheries Management Sub-committee

January 2018

MPI has released an [Initial Position Paper](#) (IPP) proposing changes to the total commercial catch for rock lobster in four quota management areas on 1 April 2018. NZSFC is asking clubs and individuals for comments on the proposals particularly in the controversial area of the Hauraki Gulf and Bay of Plenty (CRA 2). There are also proposed management changes in CRA 4, CRA 7, and CRA 8 (Figure 1).

We have prepared a summary of the issues and draft recommendations which can be passed onto interested people in your club.

**PLEASE NOTE:** There will be a separate process later this year to look at changes to regulations controlling recreational and commercial fishing.

**Submission:** Your feedback for use in the NZSFC submission is required as soon as possible, **by 31 January at the latest.**

Individual and club submissions can be made direct to [MPI](#) by **9 February.**

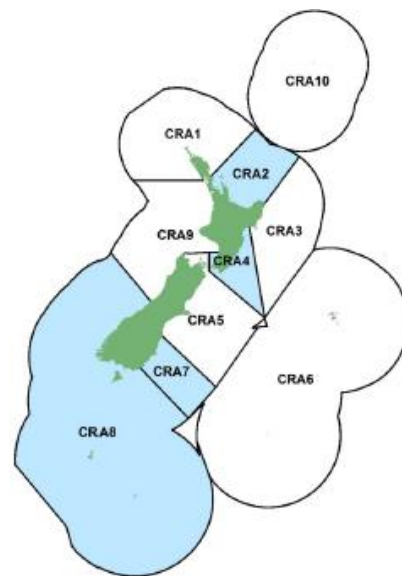


Figure 1. Areas with proposed management changes for rock lobster (blue).

## CRA 2 Management Proposals

### **Main Points of interest:**

- Stock assessment models that are used to develop management advice rely heavily on self-reported commercial catch rate (CPUE) data.
- This is the first time the CRA 2 catch rate analysis takes into account the increased efficiency of commercial vessels and gear in any rock lobster assessment. The need to account for efficiency gains has been an issue raised by NZSFC in submissions for the last eight years.
- **The CRA 2 stock assessment results show a sustained decline in this fishery over many years**, which is a better fit to the experience from recreational fishers (Figure 2). This decline was not halted by the 15% reduction in the TACC in 2014 or the further 25% voluntary catch reduction agreed to by commercial fishers in the last 2 years.
- The CRA 2 stock assessment uses a revised recreational catch history which fitted to the 2011–12 National Panel Survey of 41 tonnes (t) and other survey estimates.

The current allowance for recreational fishers is 140 t and the model estimates the recreational harvest in 2016–17 at about 37 t.

- The current Total Allowable Catch (TAC) is 416.5 t, but the actual catch taken in 2016–17 was around 244 t based on assumptions in the stock assessment model.
- **The stock assessment estimates the spawning stock biomass (SSB) is at 18.5% of the unfished biomass**, which is below the 20% reference point which requires a time constrained rebuild plan. This part of the population consists of mature female rock lobster only. This includes mature fish under the minimum legal size and crayfish that are carrying eggs which cannot be legally taken.
- At the start of the spring/summer period (1 October) in 2016 the model estimated the total spawning stock biomass was 328 t.
- **The current estimate of the vulnerable biomass is just 5% of the unfished vulnerable biomass.** At the start of the fishing year (1 April) in 2017 the model estimated the total vulnerable biomass was just 203 t. This is the portion of the stock that is available to fishers and will include more females in the second half of the fishing year (spring/ summer period after eggs have been released).
- **The NRLMG could not agree on a new management target** but agreed on an intermediate target to double the current vulnerable biomass. The greater the catch reduction the higher probability of reaching that target quickly.
- The CRA 2 management options proposed are for a decrease in the current 200 t TACC to either 80 t, 100 t, 120 t or 140 t (Table 2). NZSFC supported having a wide range of options for consultation at this time.
- The only proposal that complies with the MPI Harvest Strategy Standard guidelines on rebuild times is option 4 with a 191.5 t TAC and 80 t TACC, which would reach the intermediate target in 4 years with average recruitment.
- **MPI stated that they would not consider closing the fishery** as the hard limit of 10% Spawning Stock Biomass has not been reached. A seasonal closure can be considered as part of the review of regulations which is a separate process later this year.

*Table 1: Time taken to reach the CRA 2 interim target.*

Option	CRA2_01	CRA2_02	CRA2_03	CRA2_04
TAC	251.5 t (40% ↓)	231.5 t (44 % ↓)	211.5 t (49% ↓)	191.5 t (54% ↓)
Rebuild to intermediate target (with 50% probability)	9 years	7 years	5 years	4 years
Rebuild to intermediate target (with 50% probability and low recruitment)	?	?	15 years	8 years

### **Discussion:**

NZSFC and LegaSea have engaged with its supporters, NRLMG and politicians about the collapse of the rock lobster population in CRA 2. Concerns have been raised about critical flaws in the Quota Management System, the non-representative nature of the existing participants in “stakeholder” management groups, and the claims that current practice is “world leading” fisheries management. These issues have been raised in previous

submissions, found support during LegaSea surveys and the Crayfish Crisis campaign prior to last year's election.

NZSFC and its supporters objected to the 2014 stock assessment and subsequent Management Procedure. The continued decline in the fishery and new approach to the stock assessment confirmed that the 2014 decisions did little to save CRA 2.

Contrary to some claims by commercial interests, the main problem in CRA 2 has been poor recruitment (low numbers of new fish reaching legal size) not high recreational or illegal catch.

The other claim, that CRA 2 has always been a low productivity stock, may also be false. It has just been overfished for a long time and now has little resilience to cope with a period of poor recruitment.

NZSFC, its supporters and respondents to a recent public poll have supported the need for a significant reduction in catch to rebuild the stock in a reasonable time frame, not just to the intermediate target, but to the stock sustainability target (reference biomass). This is particularly important if recruitment into the fishery remains at the current low levels (the average of the four most recent years, 2010 to 2014), **as some options are not projected to ever reach the intermediate target (Table 1).**

In this review process the main focus will be on setting a reduced TACC and allowance for recreational harvest.

While current recreational catch is low, the rebuild time could be slowed significantly if recreational catch increases as that same rate as the stock increases. There will be proposals later in 2018 on possible regulation changes to limit the recreational harvest to the allowance made during this process.

Commercial fishers have supported a limited catch reduction to a 140 tonne TACC, citing an unreasonable economic impact on fishers and the community. NRLMG have ensured these points are strongly expressed in the discussion document.

### ***Recommendations CRA 2:***

- NZSFC provide a detailed submission on recreational experiences in CRA 2, the need for better quality science, and the need for NRLMG and the Minister to follow the science advice.
- Get fishers who witnessed the stock decline to tell their story.
- Support the 80 t TACC which is predicted to double the CRA 2 biomass in 4 to 8 years.
- Support the 50 t allowance for recreational harvest which is at the upper bound of the 2011–12 NPS estimate of 41 t plus or minus 23%.
- State that recreational fishers are willing to contribute to the rebuild, as long as the benefits from the rebuilt stock are shared.

Table 1: Summary of options in current TAC review

Stock	Option	TAC	TACC	Allowances		
				Customary Māori	Recreational	Other mortality
	<i>Status quo</i>	416.5	200	16.5	140	60
CRA 2	CRA2_01	251.5 ↓	140 ↓			
	CRA2_02	231.5 ↓	120 ↓	16.5	50 ↓	45 ↓
	CRA2_03	215.5 ↓	100 ↓			
	CRA2_04	191.5 ↓	80 ↓			
CRA 4	CRA4_01: <i>Status quo</i>	484	289			
	CRA4_02: Based on the operation of the CRA 4 management procedure	513.8 ↑	318.8 ↑	35	85	75
CRA 7	CRA7_01: <i>Status quo</i>	132.52	112.52			
	CRA7_02: Based on the operation of the CRA 7 management procedure	117 ↓	97 ↓	10	5	5
CRA 8	CRA8_01: <i>Status quo</i>	1,053	962			
	CRA8_02: Based on the operation of the CRA 8 management procedure	1,161.7 ↑	1,070.7 ↑	30	33	28

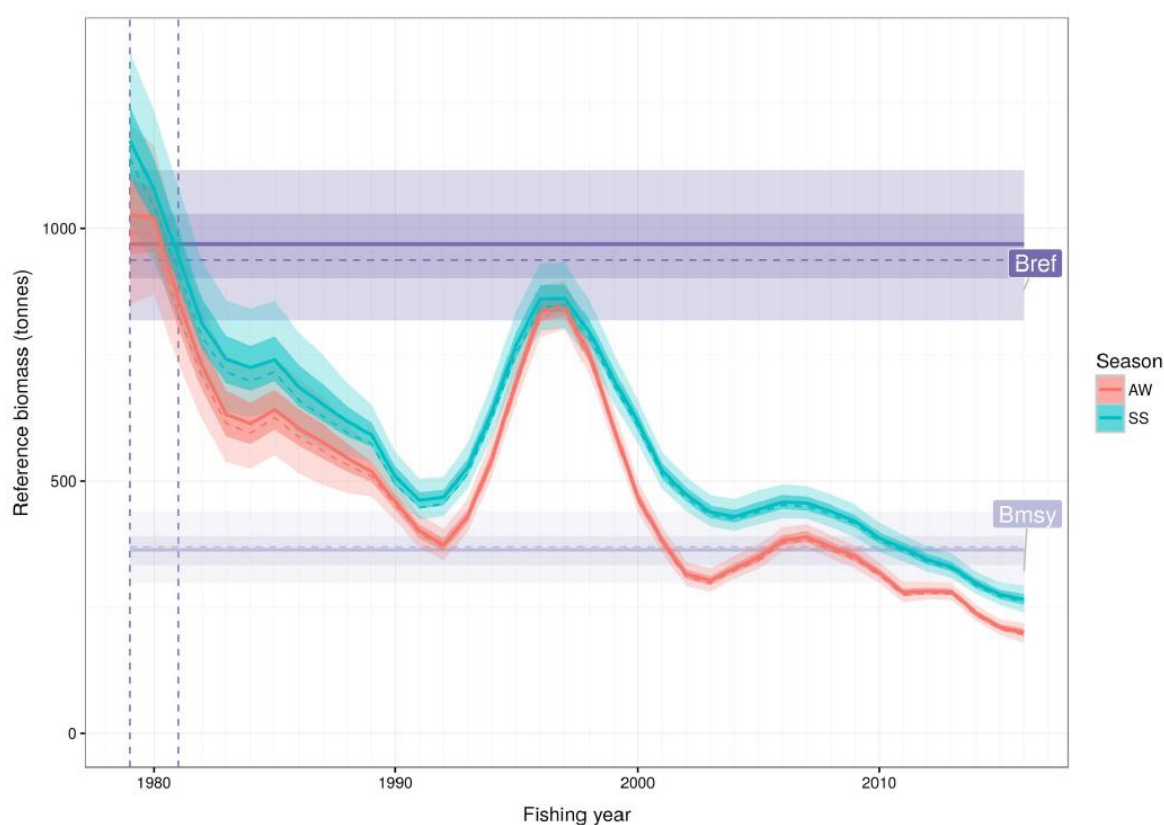


Figure 2: The vulnerable biomass trajectory from the 2017 CRA 2 stock assessment. The Base Case focuses on the years from 1979 to 2017 when there is some catch and effort data. The fishing year is split into two seasons Autumn/Winter (AW) and Spring/ Summer (SS) because the vulnerable biomass changes when females without eggs can be taken in SS. Male and females are exploited at different rates. This adds to the complexity in the stock assessment and interpretation of the results.

Bmsy is a model estimate assuming perfect data and management and the science advice is that it should be ignored for rock lobster. The Reference Biomass (Bref) was based on the first few years with catch and effort records. This was set in 2014 when the trajectory was much flatter, and industry argue that Bref is now too high as a target reference point in the new assessment. Recreational fishers wanted a reference biomass at or above the peak in the mid 1990's (Figure 2).

## CRA 4 Management Proposals

### Points of Interest:

- The CRA 4 Management Procedure has recommended an increase to the TACC of 29.8 t
- 2017 was the first year in which this Management Procedure was used.
- The Management Procedure recommended a 70 t cut to the TACC in 2017 when it was first used. This reduction probably led to higher CPUE in the most recent fishing year, and so the Management Procedure recommends a TACC increase.
- These results are based on the stock assessment model developed in 2016, this model does not take into account the increase in efficiency over time, as in the new CRA 2 assessment, and it is likely that if taken into account the Management Procedure would not be recommending this increase.
- There is some anecdotal evidence of a large shift in effort from Hawke's Bay and the Wairarapa region to Wellington and the west coast. These areas have historically not been fished as intensely, which could be contributing to the higher catch rates.

Table 2: Summary of CRA 4 Management Proposals

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	Other mortality
CRA4_01: Status quo	484	289			
CRA4_02: Based on the operation of the current CRA 4 management procedure	513.8 ↑	318.8 ↑	35	85	75

### Discussion:

CRA 4 CPUE has been declining rapidly since 2012 and a TACC cut was made in the 2016–17 fishing year, as determined by the new Management Procedure. This cut was intended to halt the decline and help get the fishery towards the target stock size. Industry representatives seemed surprised by the recommendation to increase the TACC in 2018 and there is discussion about a more precautionary approach, to maintain the recent intent to rebuild the stock.

The CRA 4 model used in 2016 is most likely underestimating the decline in this stock. It has been shown in CRA 2 that it is important to take into account increasing fishing efficiency over time. If a similar approach was applied to CRA 4 a much longer rebuild time would be needed.

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

- NZSFC submit supporting option CRA4\_01 to maintain the status quo.
- The submission highlights the need to act with precaution when making decisions based on a model that is likely to be flawed.
- The NZSFC request the views/experience of recreational fishers from NZSFC clubs in CRA4.

### **CRA 7 Management Proposals**

#### **Points of Interest:**

- The CRA 7 Management Procedure has recommended a 15.52 t cut to the TACC for the 2018/19 fishing season
- This has come from a drop in the most recent CPUE from an all-time high.
- CRA7 is believed to be at twice the agreed reference level and this is a precautionary cut recommended by the Management Procedure to take account of the decline in abundance.

*Table 3: Summary of CRA 7 Management Proposals*

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	Other mortality
CRA7_01: Status quo	132.52	112.52			
CRA7_02: Based on the operation of the current CRA 7 management procedure	117 ↓	97 ↓	10	5	5

#### **Discussion:**

CRA 7 CPUE was the highest on record in the 2016/17 fishing year. It has now dropped to the second highest point in the time series. This fishery mainly catches small crayfish before the migrate south into CRA 8, so abundance is very reliant on recent recruitment.

This cut will reduce the TACC to a similar level to 2016/17 (98 t) when the CPUE was still seen to be increasing.

#### **Recommendations for CRA 7:**

- NZSFC submit supporting option CRA7\_02



## CRA 8 Management Proposals

### Points of Interest:

- The CRA 8 Management Procedure has recommended a 108.7 t increase to the TACC.
- CPUE in CRA 8 is on par with the highest level in the country, over 3.5kg/pot lift
- The fishery is estimated to be 140% of the reference period target.
- Last time the TACC was increased (by 57 t in 2009) after an increase in CPUE, it was followed by a decline. While the stock is currently doing well, **a 109 t increase seems excessive.**

Table 4: Summary of CRA 8 Management Proposals

Option	TAC	TACC	Allowances		
			Customary Māori	Recreational	Other mortality
<b>CRA8_01: Status quo</b>	1,053	962			
<b>CRA8_02: Based on the operation of the current CRA 8 management procedure</b>	1,161.7 ↑	1,070.7 ↑	30	33	28

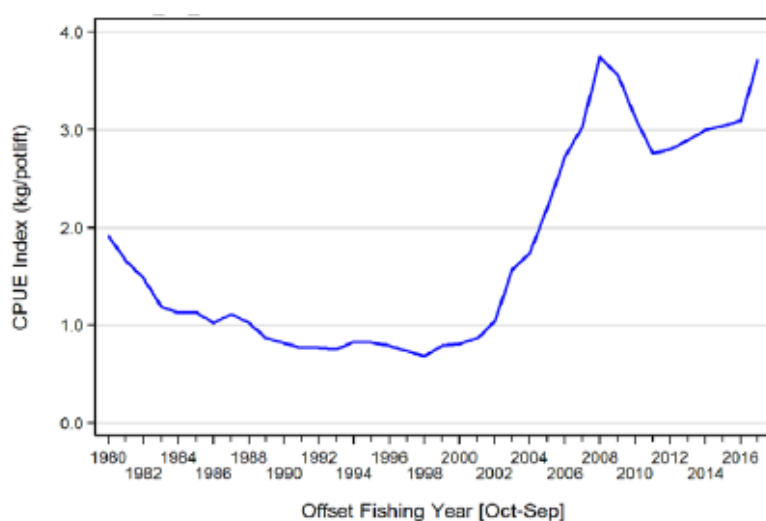


Figure 3: The trend in CRA8 catch per unit effort (CPUE) since 1979–80

### Recommendations for CRA 8:

- NZSFC submit supporting the status quo.
- The NZSFC request the views/experience of recreational fishers from NZSFC clubs in CRA8.

Comments on these proposals can be sent to

[secretary@nzsportfishing.org.nz](mailto:secretary@nzsportfishing.org.nz) or

[bluewater@pl.net](mailto:bluewater@pl.net)