

**Rock Lobster & Giant Crab
Resource Assessment Group
RECORD OF MEETING**

**Meeting No.7
8 March 2012
DPI Queenscliff**

Chair: Ian Knuckey

Meeting Commenced: 10:00am

1. PRELIMINARIES

Present	
Ian Knuckey	Independent Chair
David McCarthy	Industry member – western zone rock lobster
Anthony Ciconte	Industry member – eastern zone rock lobster
David Lucas	Industry member – eastern zone rock lobster
Lawrence Moore	Recreational member – VRFish
Terry Walker	Fisheries Victoria Snr Rock Lobster Scientist
Adrian Linnane	SARDI Senior Rock Lobster Scientist
Renee Vajtauer	Seafood Industry Victoria
Melissa Schubert	Fisheries Victoria Rock Lobster Fishery Manager RAG Executive Officer
Observers	
Rick McGarvey	SARDI
David Reilly	Fisheries Victoria Rock Lobster Research Program
Fabian Trinnie	Fisheries Victoria Rock Lobster Research Program
Apologies	
Gary Ryan	Industry member – western zone rock lobster
Shannon Churchill	Industry member – western zone rock lobster

1.1 Welcome and apologies

Ian Knuckey welcomed members to the seventh meeting of the Victorian Rock Lobster and Giant Crab Resource Assessment Group (RLRAG).

Apologies were received from Shannon Churchill and Gary Ryan.

1.2 Adoption of agenda

Dave Lucas asked that the issue of the fisher-vessel boat days be addressed as industry members have an ongoing concern with the two year exclusion of experienced fishers' catch history as a result of buying a new fishing vessel.

The Chair agreed that this item should be discussed under Agenda Item 2.1 (however, see Agenda Item 6.3 for resolution on this issue).

1.3 Minutes from last meeting

The minutes from Meeting 6 will be distributed and approved out-of-session.

2. STOCK ASSESSMENT MODEL

With the new stock assessment model completed, Terry Walker provided the RLRAG with a summary of the improvements in data capacity, as described below:

Feature	Old Model	New Model
First applied in Victoria	2004	2012
Spatial resolution	Zone	Region or zone
Time steps	Year	Month
Start fishing year	1951-52	1978-79
Start length-class	80mm	60mm
Length-class ranges	10mm	5mm
Length-classes fitted	Above legal minimum length	Above 60mm
Catch per unit effort	Unstandardised	Standardised
Fleets for catch and CPUE	Single	Multiple
Fleets for length-frequency	Single	Multiple
Growth transition matrices (determined from tag length-increment)	Single matrix determined from data pooled over zone	Site matrices averaged to region and region matrices averaged to zone

Terry noted that he has reanalysed the tag-release-and-recapture data, has analysed the 16 sites across Victoria and has the capability to vary growth rate over time. This information has not yet been included in the modelling, but the capability will soon exist to model different growth rates across the fishery.

Dave Lucas indicated the need for caution with use of this data as there are only two collection sites in the eastern zone and the pots do not capture animals as small as 60mm. It was pointed out that the new model has the capacity to include information from these smaller sized animals in different selectivity functions for both east and west.

Pre-recruit data

At the previous meeting, the RLRAG discussed the appropriate length of the time series of recruitment data that should be included in the model, but no resolution was achieved. Historically, past assessments have made forward projections of stock status based on sampling only from the last ten years of recruitment data. The reasons for using this time series were not clear and RLRAG queried whether it was a valid assumption to only use the past ten years of recruitment data for forecasting model predictions.

The model shows recruitment varies substantially and although a cyclical pattern may be evident, there was no evidence of any particular trend in recruitment (up or down) across the entire time series (from 1978) in either of the zones (see Figure 1). The RLRAG recognised that if a multi-decadal cycle of recruitment exists, forecasting based on only recruitment from the most recent ten years is more likely to lead to spurious results. It was recognised that this artefact may have hampered the accuracy of model forecasts (and total allowable commercial catch (TACC) setting) in previous years. As such, the RLRAG agreed that it would be more appropriate for the assessment to model forecasts based on recruitment indices over the entire time period since 1978, rather than the past 10 years.

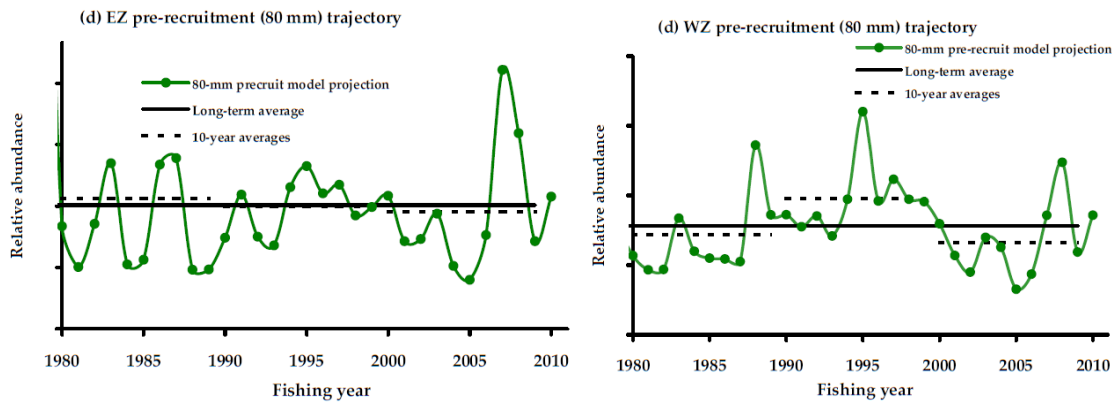


Figure 1: Model trajectory of 80mm length pre-recruits.

Recommendation:

- **That the full time series of recruitment indices be used for the stock assessment model projections.**

Based on the assumption that it takes an average of two years to grow from a puerulus size class (60mm) to a pre-recruit size class (80mm), and another two years to grow to the legal minimum length (110mm for males and 105mm for females), it was demonstrated that there is good consistency between the pre-recruit and puerulus data and that the growth matrices within the model are corresponding well with all observed data

Adrian Linnane noted that the peaks and troughs of the Victorian data line up well with the equivalent data from South Australia, and that the growth rates were also consistent. This gave the RLRAG increased confidence in the integrity of the new model.

Biological Reference Year

It has previously been agreed that the biological reference year would be moved from 1951 to 2001, but that there would be no fundamental change to the target and limit reference points, which would become relative to 2001. These relative values have now been derived and were presented to the RLRAG.

- The target available biomass becomes 173% of B_{2001} for the western zone and 219% for the eastern zone.
- The limit reference point (egg production) becomes 35% of B_{2001} for the western zone and 104% for the eastern zone.

David McCarthy conveyed his concern with the current concept of managing the fishery to achieve an uncertain biomass target. He indicated that industry feels the target is artificial and based on an historical estimate and suggested that the industry view is that Victoria should adopt the catch rate management strategies used in South Australia. Dave Lucas indicated apprehension with the use of some historical data, for which the robustness is questionable, and the use of this data to set biomass targets that effects the profitability and efficiency of the fishery.

The RLRAG acknowledged that there is uncertainty in the absolute biomass in the old 1951 reference year, but less uncertainty in the current biomass relative to that year and much less uncertainty in the current biomass relative to 2001. This point has been reflected in the discussion contained within the Decision Framework Review Report. The intent of the target reference point has been retained relative to the B_{1951} estimate. It was pointed out to the industry members that if a wholesale change to the Management Plan is required (See Decision Framework Review below), this was outside the scope of the Review (and the

RLRAG). The Chair noted the divergence between some industry members and Fisheries Victoria with the fundamentals of the Management Plan and suggested this was best taken up by Industry directly with Fisheries Victoria.

Decision Framework Review

A copy of the Draft Report on the Decision Framework Review had been sent to RLRAG members out of session. Generally, members accepted that the report was a good reflection of the review process and were supportive of the outcomes. Members suggested a number of minor amendments to the report and endorsed it for release for public comment subject to those amendments.

The Executive Officer noted that the reports could be sent to stakeholders as early as 9 March, and that the comment period would be open until Monday 26 March 2012.

David McCarthy, as President of the Portland Professional Fishermen's Association, tabled an alternative harvest strategy for consideration by the RLRAG. The harvest strategy is based on that in place in South Australia, premise of which is that the TACC is determined by raw catch per unit effort (CPUE).

After reflecting on the alternative harvest strategy, the RLRAG agreed that it was worthwhile to properly consider an alternative – and that this proposal should be fully developed and tested if it had wide industry support. The RLRAG did not consider that incorporation of the proposal fell within its review of the Decision Framework because it was well outside the bounds of the current Management Plan. It was pointed out by Dr Linnane that the development of a CPUE harvest strategy in South Australia required significant work on the development and testing of the strategy before it was accepted. That process would also need to be undertaken if a change was expected. The RLRAG recommended that the alternative proposal be submitted as part of the public consultation phase and that the meeting record should show that the report had been tabled to the RLRAG for advice but that the group did not have a considered opinion on it at this stage.

Recommendation:

- **Subject to minor amendment, the RLRAG agreed to endorse the Decision Framework Review Report for public comment.**
- **The RLRAG agreed to continue using the target reference point as previously agreed, and that any further review of targets and limits would require a full review of the Management Plan.**
- **The RLRAG agreed that David McCarthy's paper should be submitted as part of the public consultation phase.**

3. PRESENTATION OF STOCK ASSESSMENT RESULTS

3.1 Rock Lobster Fishery Stock Assessment

Terry introduced the draft Rock Lobster Fishery Stock Assessment Report and presented information on the egg production and available biomass relative to the limit and target reference points respectively.

In the current assessment, the estimated egg production in the western zone is at 72% of $B_{2001-02}$, which is well above the limit reference point of 35% of $B_{2001-02}$. The estimated available biomass in the western zone is 70% of $B_{2001-02}$, which is considerably below the target reference point of 173% of $B_{2001-02}$.

Although still quite low, the estimated egg production in the eastern zone is improving and is at 137% of $B_{2001-02}$, which is above the transposed limit reference point of 104% of $B_{2001-02}$.

The available biomass target in the east is 216% of $B_{2001-02}$, however the estimated available biomass is only at 110% of $B_{2001-02}$.

He noted that as a consequence of the RLRAG agreement to use recruitment data from 1978/79 in the stock assessment projections as the base case, the TACCs for each zone would have to be amended out of session immediately after the meeting. The RLRAG members were able to provide comment on the results of the model run with the new base case and give out-of-session endorsement by Monday 26 March.

Following this out of session change to the base case, the model forward projection for the western zones indicates that for a fully taken TACC of 260 tonnes, the available biomass would rebuild to the target within ten years (by 2020–21).

In the eastern zone, a fully taken TACC of 48 tonnes will result in the available biomass rebuilding to the target within ten years (by 2020–21).

As a means of testing the final step in the proposed Decision Framework, Terry presented a comparison of the trend of raw CPUE with the model-generated available biomass trajectories for each zone. In both cases, the trend over time of raw CPUE was consistent with the trajectory of available biomass.

For the purposes of the future presentations of this information, the RLRAG recommended that the graphs should be simplified to reflect the requirements of the decision rule. That is, the trend line for the model projection and the unstandardised CPUE (including the unstandardised CPUE mean for November – January) only should be included.

Recommendation:

- **The RLRAG agreed to provide comments on the amended rock lobster stock assessment and out-of session endorsement by 23 March 21012.**

3.2 Giant Crab Fishery Stock Assessment

Terry Walker presented the results of the Giant Crab Fishery stock assessment to the RLRAG. He noted that the assessment period had been changed to fishing year to align with the Management Plan.

The total landing of giant crab by all fishers was 11.3 tonne in 2010-11, which was 5.1 tonne less than the previous assessment. The catch from fishers targeting giant crab was 10.4 tonne, 4.3 tonne less than the previous year. The targeted CPUE, measured as kilograms of giant crab per 24-hour pot lift (i.e. kg per pot day), dropped for a fourth successive year to 0.26kg per pot day. This is below the limit reference point (0.37kg per pot day) and below the trigger (80% of the limit reference point) of 0.29kg per pot day.

David McCarthy noted that some fishers have been leaving their pots in the water for weeks at a time and that the measure should therefore be 'per pot lift' rather than 'per pot day'. Anthony Ciconte added that there are issues with pots being left in the water but not being used to fish (i.e. are unbaited) and with small amounts of quota being left on licences to allow pots to remain in the water. He felt that this could affect CPUE results but it was recognised that this is likely to be only a small fraction of the total CPUE data.

The RLRAG recommended that these issues should be examined.

Action:

- **The RLRAG asked that data, from both the rock lobster and giant crab fisheries, be examined to determine the impact of (1) pots being left in the water for extended periods of time and (2) pot lift vs pot day for giant crabs.**

Given the status of Victoria's Giant Crab Fishery the value of commercial CPPUE data as an index of abundance is somewhat dubious. The RLRAG accepted that the giant crab stocks are well below sustainable limits but that there is a paucity of information to enable a detailed understanding of the current trends and condition of the fishery.

The RLRAG agreed that there should be a reduction to the TAC, which was at 18 tonnes for the 2011-12 fishing year, but noted that there was no mechanism in the Management Plan to direct how much that reduction should be. The group therefore felt that they had no capacity to provide a recommendation for the Giant Crab Fishery TAC for 2012-13.

Recommendation:

- **The RLRAG agreed to endorse the stock assessment report for the Giant Crab Fishery.**
- **The RLRAG agreed that there should be a TAC reduction in the fishery, but noted it had no capacity to recommend an appropriate amount for the reduction due to the lack of direction in the Giant Crab Fishery Management Plan.**

Adrian Linnane noted that South Australia will be reviewing their giant crab fishery management arrangements and that a tri-state meeting could be organised to discuss current issues and improve the common understanding of the fishery.

It was recommended that the stock assessment report be accepted and that a future RLRAG meeting be organised to review the methods of assessment in the Giant Crab Fishery and compare current fishery trends with giant crab fisheries in other jurisdictions.

Action:

- **The RLRAG to consider arranging a meeting between South Australia, Tasmania and Victoria to discuss issues and management arrangements in each jurisdiction's giant crab fishery.**
- **The RLRAG agreed to set aside a future meeting of the RLRAG to review the management and assessment arrangements in the Giant Crab Fishery.**

4. DISCUSSION OF STOCK ASSESSMENT REPORTS

The stock assessment reports were discussed under the previous agenda item. However, two additional action items were discussed and agreed to: 1) the Chair will develop a summary of both fisheries on behalf of the RLRAG, which will be sent to the group along with the revised Rock Lobster Fishery Stock Assessment Report, and 2) Adrian Linnane will provide a summary on the issues in the South Australian Giant Crab Fishery.

Action:

- **The Chair to develop a summary of the outcomes of the stock assessments for the Rock Lobster and Giant Crab Fisheries, which will be sent to RLRAG members for endorsement along with the revised stock assessment report for the Rock Lobster Fishery.**
- **Adrian Linnane to provide a summary on the issues in the Giant Crab Fishery in South Australia.**

5. DECISION FRAMEWORK REVIEW

The review of the Decision Framework and the resultant report were discussed under Agenda Item 2.

6. OTHER ISSUES

6.1 Stock Assessment Workshops and TAC Forums

The RLRAG discussed the design and timing for this year's workshops and TAC forums. The group recommended that the meetings are developed as TAC Forums only and that the presentations are designed accordingly.

6.2 DPI → SARDI research and Stock Assessment

James Andrews informed the RLRAG that DPI was in the final stages of developing a contract with SARDI that enabled SARDI take the lead in delivering rock lobster and giant crab stock assessments for both jurisdictions. This alliance was prompted by the national strategy to promote the rationalisation of research.

The contract will initially be for a two year period, with SARDI 'shadowing' DPI over the first 12 months and then taking the primary role in the second year. DPI scientists will provide support to SARDI.

6.3 Other issues

Dave Lucas and David McCarthy requested that a comparative assessment be conducted to determine the effect on the fishery from the removal two most experienced fishers in the eastern zone as a result of each purchasing a new boat (i.e. the standardisation criteria of a vessel-fisher combination having to be in the fishery for two years before their catch history is included in the assessment).

Action:

- **Terry Walker to conduct a comparative analysis to determine the effect on the fishery from the removal of the catch history of the two most experienced fishers in the eastern zone.**

The Chair concluded the meeting and closed it at 4.30pm.