

### DRAFT RECORD OF MEETING

Meeting #32, 30 September 2021

Microsoft teams meeting

**CHAIR:** Ian Knuckey

**MEETING COMMENCED:** 9:30am

## 1. PRELIMINARIES

<b>Present</b>	
Ian Knuckey	Chair
Toby Jeavons	Victorian Fisheries Authority (Executive Officer)
Klaas Hartmann	Institute of Marine and Antarctic Studies (IMAS)
David Reilly	Victorian Fisheries Authority
Lawrence Moore	Recreational fishing representative/ VRFish
Gary Ryan	Industry Member
Wayne Dredge	Industry Member
Ross Bromley	Industry member
Dallas D'Silva	Victorian Fisheries Authority
Karlie McDonald	Institute of Marine and Antarctic Studies (IMAS)
Peter Galvin	VRFish
Zeb Johnston	Industry
Rohan Henry	Independent indigenous representative
<b>Guests</b>	
Robert Timmers	Latrobe Valley Scuba Club
Trevor Burrige	VRFish dive reference group
<b>Apologies</b>	
Rafael Leon	Institute of Marine and Antarctic Studies (IMAS)
Joanne Butterworth Gray	Seafood Industry Victoria (SIV)
Caleb Gardner	Institute of Marine and Antarctic Studies (IMAS)
Ben Scullin	VR Fish
Markus Nolle	Industry member

### 1.1. Welcome

Ian Knuckey, as Chair, stated an Acknowledgement of Country and welcomed members to the 32nd meeting of the Victorian Rock Lobster and Giant Crab Resource Assessment Group (RLRAG). Ian noted the apologies to the meeting. All persons present introduced themselves and stated any conflict of interest. Trevor Burrige attending as an observer on behalf of Ben Scullin. Rob Timmers attending as an observer representing the recreational sector.

### 1.2. Adoption of agenda

The agenda was adopted without any changes.

### 1.3. Minutes and actions from last meeting

Ian noted that a final copy of the minutes of the last meeting had been circulated via email. As a matter of process, the RLRAG endorsed the minutes to record that they are a true and accurate reflection of the meeting.

Progress against the outstanding actions were summarised as follows:

- Voluntary length frequency analysis – To be addressed under Agenda Item 4.1.
- Review of spatial boundaries – To be addressed under Agenda Item 5
- Klaas to provide examples of Target Reference points at RLMPSC – To be completed at next week's RL MP review meeting.
- Klaas to undertake MSE to inform discussion on altering LML – To be addressed at December RLRAG – Ross commented on presentation at WFC focusing on changes in growth rates as a result of warming water temperature. Klaas has a PHD student who will look into this factor and provide an update to the group.
- Investigating a vessel efficiency factor – Klaas to complete for December RLRAG
- David Reilly to circulate historical stock assessment reports detailing tech improvement – Completed. Klaas to incorporate as part of this year's Stock Assessment reports and present at December RLRAG.
- GC Harvest Strategy update – Klaas to incorporate updates as discussed at RLRAG.
- Modelling – Klaas to provide further updates on WRL model development and circulate out of session.
- Toby to schedule the next RLRAG meetings – Completed. 2 December 2021.
- Toby to schedule a meeting for Tom Consentino to provide a market/access sampling presentation to industry – Completed

#### **The following actions remained outstanding:**

##### Review of Harvest Strategy

- Klaas to model different levels of PRI and likelihood of breaching reference points. Analyse and present alternatives with PRI uncertainty and change and rolling average approach
- Klaas to develop a strategic plan for tag recapture program based on findings of growth sensitivity analysis
- Klaas to incorporate alternative LML's as component of work in developing an MEY approach to fisheries management
- Consideration of formally adopting a new method to calculate egg production
- Klaas to consider including concept of a sliding PRI scale (including above a threshold on the CPUE/TACC table) as part of the Harvest Strategy review

##### Indigenous participation

- Toby to include during rock lobster management plan review process.

##### Stock Assessment

- Klaas to review growth estimates of large lobster in the Eastern Zone

##### Model development

- Klaas to investigate MEZO projection/harvest strategy evaluation function – If funding is pursued
- Rafael to investigate temporal relationships – Outstanding
- Decision to be made on final position on which model to adopt going forward following completion of new WRL model in 2021

## Research projects

- Klaas to contact Katie Creswell to inform discussion of South Easterly weather patterns and their impact on productivity in Victoria – Project to kick off again early 2022
- Klaas to provide update to research project investigating the impact of larger lobster keeping smaller lobster from pots – Klaas to get in touch with SA to reinvigorate

## Biotoxin Management

- Matt to take DRAFT biotoxin Management Plan to SRL

## Data collection

- David and Toby to consider data collection requirements that are mandated/overlap with the voluntary data collection program and be presented in future when transition from Vic-eCatch has settled.

## Puerulus monitoring program

- David to progress engaging with Southern Otway Landcare Network (SOLN)

## Giant Crab

- Provide update on continued progress against review of Harvest Strategy
- Toby to provide update on GC research project

## Other business

- Markus to raise the MEZO project, biotoxin monitoring, whale entanglement and Aqwi-S at the upcoming SRL meeting

All other actions arising from Meeting 32 are outlined in the attached 'Actions List' circulated with the meeting minutes.

## **Sector update:**

Gary Ryan – Only worked a handful of days over winter and in a different area and therefore not too much to report. Winter prices low and conditions not favourable.

Mark Peychers – Reports from Eastern Zone suggesting improvement of pre-recruits. The lack of markets has not been conducive to allowing fishers to do what they normally would.

Zeb Johnston – Fished all winter and caught less than half of what we did the year before. It was a bad winter in terms of weather and catches. SA cray price at \$90 and now back at \$45.

Wayne Dredge – Only one vessel working due to market. Catastrophic with poor winter weather patterns and the fish the worst we have ever seen them. A lot more effort required to catch fish.

Mark Peychers – Markets and prices are volatile. Recent incident in Hong Kong involving moving fish across the border through grey channel resulted in police vessel capsizing and since the border has been locked down very tight. Reports of undercover officers in markets and has frightened customers.

Rohan Henry – Will engage with coastal TA mobs and seek interest in involvement in RL MP process. Opportune time to get some value add about other fisheries. Also putting some proposals together to feed back into MPs and access business development opportunities. Updates to be provided at future meetings.

Lawrence Moore – Poor weather, poor catches. An abalone diver reportedly saw one rock lobster in ten dives on back beach. General feeling is that not seeing signs of improvement. Has been some increase in undersize lobster, albeit only marginally.

Rob Timmers – Dived recently at Wilsons Prom and observed 2 undersize crays and retained one lobster just on size.

Peter Galvin – Hard going however anecdotal good news in Woolamai area relating to increase in numbers of undersize.

Toby Jeavons – Stock Assessment contract changes – Karlie taking on a larger portion of work and will be involved in larger assessment process, rather than just recreational component. IMAS contract to end in June 2022 and will need to again go out to market for these services.

## **2. MANAGEMENT UPDATE**

### **2.1 Management Plan review**

Toby provided an update on the rock lobster management plan review process. The first steering committee meeting was held in August, with the second meeting to be held next week. The initial meeting focused largely on setting the context for management of the Vic RL fishery and the next meeting to begin focusing on developing a vision and completing a risk assessment process. Toby encouraged those not involved in this process to get in touch with industry representatives of Matt Harry, Ross Bromley, Wayne Dredge, Gary Ryan, Alex Haberfield and Les Feast.

### **2.2 Monitoring program update**

David Reilly thanked the commercial fishers and onboard observers and explained that there is not much happening at present.

- Puerulus collector program in Apollo Bay – Challenges associated with COVID restrictions – Close to begin installing in Apollo Bay for trial. Looking to getting these in the water over the next month. This will form ability to undertake comparison with existing collectors.
- Existing puerulus collectors – Change of contractor has been required. Significant increase in costs associated with ongoing services under current program.
- Fixed site surveys – Completed for Eastern one. All 3 sites in Eastern Zone have shown increase in undersize lobster.
- Observer work – Has occurred at reduced level, however have managed to continue sampling across the State. Far East has had challenges with getting coverage due to restrictions.

#### **RLRAG discussion:**

Peter – Regarding the Arch rock site, reportedly the number of crays has diminished significantly.

Dave – Initially set up the Arch rock site as was typically known to have higher number of rock lobster, however we have not seen this over past few years. There was an increase observed again this year, which is positive. Rob – Could consider involvement as citizen scientists to assist in monitoring this area. Dave – New app development will provide for adding observations.

### **2.3 IMAS FRDC study overview**

Karlie provided an update on the work by IMAS in assisting with the review of the recreational tagging program. The work is due for completion in November. The objective of the project was to look at the program and identify areas for improvement. The review has analysed App features that

could be incorporated and discussed with experts overseas to identify best practice. The review has also evaluated biases under the existing program to inform developing phase two.

IMAS has also completed three fisher surveys.

- 1) Initial phone survey providing context of the fishery in recent years. This gave an opportunity to look at the impact of bushfires and the pandemic and how this has impacted fishing opportunity. It also provided insights such as 20% of respondents said they had forgotten to report tags.
- 2) Diary survey. Recruited 381 fishers to keep a log from 16 November 2020 to 31 March 2021. This provided additional catch information such as other target species (abalone) and the ability to look at two different data sources and undertake comparison of catch. However, analysis did not consider that there was additional reporting to be completed prior to end of season.
- 3) Wrap up survey – Ability to test recommendations that came out through the study. For example, when do fishers think they should be reporting catch? What type of incentives may increase participation?

Recommendations have been provided to the VFA and a full report will be available from November 30.

## 2.4 RL Tagging program update

Toby provided an overview of updates to the recreational rock lobster tagging program:

- Plastic tags have now been phased-out.
- New reporting platform launched on September 15.
- Further updates to this platform over the next 2 months to add lobster reporting functionality.
- Consultation completed on Regulation changes and on-track for reg changes to be included by 16 November – Mainly requirement to register intent and report within specified time period.

Toby extended his gratitude to IMAS for their work in undertaking an independent review of the rock lobster tagging program. Whilst the review has not yet been completed, the team has been in regular discussion with the VFA and their work is actively shaping the current RL tagging review process.

Lawrence noted positive feedback from fishers acknowledging that the new program is a better way of doing things.

## 3. APPROACH TO ESTIMATE WEIGHT OF RECREATIONAL CATCH

### 3.1 Analysis of voluntary data based on regional areas

Karlie presented an analysis of approaches to estimating recreational catch weight. The analysis has been completed following feedback from recreational fishers that the average weight has not been representative of what they have been catching and observing. This particular issue has been flagged for the Eastern zone. A key issue is that weights and gender have only been provided by citizen scientists. This data is limited by low uptake in citizen science program therefore confidence in calculations is impaired and outlines a need to look at other methods. One option is to look at the Length:Weight conversion under the Rock Lobster stock assessment model, although this requires a larger dataset including gender data.

Karlie presented a comparison of actual weight reported and assumptions using the Length:Weight relationship. The Length:Weight relationship was applied to information collected under the diary survey where participants were stratified across the state and had provided length and weight data. Using the diary survey data showed a reduced estimate of recreational catch.

IMAS recommend that the Length:Weight conversion be implemented as the process for estimating annual recreational catch weight, however need to bring in mandatory sex reporting if this is pursued.

RLRAG discussion:

The RAG members discussed the initial results presented by Karlie. There was some confusion about what information is currently collected and what would be required to get better weight estimates directly from the recreational tagging data.

It was suggested that even when divers do collect this information, many divers only estimate the length (and weight) of the rock lobster and may not use rulers / callipers or scales to determine exact measurements. This would explain why the length-weight data derived from recreational information did not seem correct. It was also highlighted that only 13% of the recreational data denoted a sex to the length or weight measurements, which would lead to a lot of uncertainties and the need for assumptions.

It was agreed that the best sex-specific length-weight relationships would be derived from the commercial data but that recreational divers may have different targeting behaviours than commercial fishers using pots.

After much discussion, the RAG agreed that if recreational divers accurately reported the length and sex of each rock lobster, then appropriate length-weight relationships could be applied to obtain the correct recreational catch weight.

Ian Knuckey – RLRAG is recommending that every report contains sex and accurate length measurement with appropriate tool be provided to rec fishers. Upon doing so we will transition to using Length:Weight conversion method for annual estimate of recreational catch.

**Action:**

- **Toby to contact App developer to make sex reporting mandatory**

## 4. 2021 ASSESSMENT

### 4.1 Investigating a spatially weighted PRI

Klaas provided an overview of an analysis reviewing the voluntary data program, particularly in considering adopting a spatially weighed PRI.

Klaas noted that Tasmania has trialled a similar measuring device to what Zeb has shown the group (fixed measuring ruler with length and weight classes). This has included use of callipers in measuring lobster and trialling a new 'hook' style measuring device. Anything that can be done to increase sample size of voluntary data program has significant value. Capacity to get a little bit of data, from lots of fishers, right across the fishery is acknowledged as being very valuable. The additional pot increase incentive in Tasmania has been an important tool in increasing participation.

In Victoria we have observed an increasing number of records under the voluntary data program. Klaas reminded the group that the voluntary data program was important in the Western Zone during the previous assessment period as a result of reduced observer coverage. The Western Zone voluntary data program showed a substantial increase in undersize abundance in comparison to other data sets. In the Eastern Zone, the voluntary program did not show the same increase in PRI as other indicators.

An analysis has been undertaken showing the distribution of sampled pots across each zone. In 2019 in the Eastern Zone there was a big increase in pots sampled in the far East, the PRI from this area

over the past few years has been quite low. The increase in sampling in this area has resulted in a lower PRI. In the Western Zone, spatial distribution has had some changes, however really high values in the far West from only a couple of vessels can be attributed to the big increase in PRI.

Applying standardisation approach taking into account spatial factors is more robust, however is still limited by sample sizes. The value of data collected under the voluntary program significantly outweighs the data collected from observer program. Recommendation is to continue with existing PRI approach.

#### RLRAG discussion:

The RLRAG discussed the concept of adopting a spatially weighted voluntary data index.

Members were of the view that undersize data is typically an over-estimate. It was recommended that only champion data is used.

David Reilly provided an update on the roll-out of blue-tooth wet tags. David acknowledged that the VFA is currently in stage two or three of transition to electronic reporting and the difficulties in getting the system up and running have meant a stall in this space. David noted that existing glitches with the wet tag system has prevented progress and that it would be good to consider other opportunities to increase participation in the voluntary pot program.

Klaas acknowledged that the more data coming in, the more accurate the assessment is, and the less precautionary management needs to be. Tasmania has trialled a range of methods that has worked well however have not found a system that is reliable and robust.

Industry members noted that the whole industry needs some uniformity with regard to how lobster are reported. The pots with escape gaps closed may also be incorporated into undersize data, and this may impact accuracy.

Ian summarised that more consistent and more representative sampling of lengths is required to get the best coverage in space and time. To assist, potentially some consistent messaging around reporting lobster. The voluntary data analysis will include the standardisation process accounting for changes in spatial shifts for comparison.

#### Action:

- **Dave to run through reporting consistency at TACC forums**
- **Klaas to include the standardisation process accounting for changes in spatial shifts for comparison during analysis of voluntary data.**

## **4.2 Industry perspectives on fishing changes impacting**

Klaas led a discussion considering any factors outside the normal standardisation factors that may impact analysing catch rates in the previous assessment period.

#### RLRAG discussion:

Industry members discussed factors to be considered when undertaking the upcoming stock assessment.

This included fishers foregoing catch rates and shifting to areas to target bigger fish that were receiving a better price and changes in fleet dynamics. Klaas noted a change in size composition, spatial areas and fleet dynamics to be considered.

Ross suggested it may be worthwhile to investigate a weather index that could be considered during assessment. Members suggested looking at swell height, wind direction, number of days fished in

logbooks and opportunity to build on data collected by Dan Ierodionou at Deakin and factor into assessment.

**Action:**

- **Klaas to investigate weather information available from Dan Ierodionou and considering as part of stock assessment process**
- **Klaas to include industry considerations when analysing CPUE during upcoming assessment**

## **5. CONSIDERING ASSESSMENT BOUNDARIES AND AN INSHORE/OFFSHORE FISHERY IN THE WESTERN ZONE**

### Eastern Zone

Karlie presented an overview of Eastern Zone fleet dynamics to inform investigating a shift in spatial boundaries. One of the approaches to look at reviewing regions is the fleet movement between zones. An analysis was completed looking at fisher/vessels that port in their own zone. San Remo was found to have the greatest movement in/out compared to the other regions. Karlie noted that a balance between data availability and finer spatial areas needs to be considered in redefining boundary areas. Ian noted that we are very limited in data for the Eastern Zone already.

### RLRAG discussion:

As an Eastern Zone fishery, Wayne suggested that from a stock perspective the Queenscliff/San Remo boundary could move closer to the heads. There is difference from the stocks but don't know whether we will gain much from moving the boundary. Potentially we could move the 145 boundary to the 22 Grid line. Wayne also suggested another line along the 149 line could be investigated. Wayne believes this would most accurately reflect the changes in biological stock that is observed on the water. He also talked about moving two lines and adding another off Cape Conran to divide apparently different lobsters in the far east.

Klaas noted that challenges may exist in standardisation for new regions and catch rate/TACC tables. Klaas to look at the sensitivity of changes the boundaries and present time series and summaries.

The RLRAG noted that any further division of the eastern zone would have implications for data quality because there is so little fishing effort in this zone.

### Western Zone

Dave presented the 40m depth interval that is used during the standardisation process for the assessment as the defined cut-off between the inshore higher value red lobster and offshore speckled lobsters.

Dave displayed a chart showing that throughout time the off-shore contributed about 60% of catch, however as quota was introduced this shifted significantly to approximately 70-80% of catch taken from in-shore fishery. This has resulted in more fishing pressure occurring on the in-shore fishery.

Approximately 50% of offshore catch comes from the Apollo Bay region.

Dave noted that the South Australian Northern Zone has offshore/in-shore fishery, however Adrian Linane has questioned the value in pursuing this approach for Victoria.

Dave posed the following questions for consideration: Do we need to consider managing the offshore/inshore fishery differently? What are the key considerations/incentives to fish in the offshore area?

### RLRAG discussion:



Ian raised an issue about how we manage that the 40m contour line cuts through the middle of many blocks and how we would attribute effort to either side. Dave suggested one approach would be that if the line intersects a block it is considered 'in-shore'. Gary understood that the inshore/offshore fishery related to lobster colour however, historically defined as three zones, 0-40m, 40-80m and 80m+. There is a split at 40m depth for colour, however the mid water range still accounted for good catches of speckled crays through to more recent time. However, TACC was not binding until 2010 and people used to fish as hard as they could during this time. 80m+ range used to have approximately 60% better catch rates, however this has reduced through time and the reward is no longer as it used to be. Marketing of fish should be a focus for the offshore fishery.

Members noted it is now more attractive to fish off-shore rather than pre-COVID and that creating a separate quota zone reduces capacity for individual operators to change fishing practices to market conditions. Klaas noted that depth is currently used in standardisation process.

Members also suggested that the in-shore fishery will not stand up to our current quota. Catch rates off-shore will begin to be more attractive as the in-shore catch rates decrease. Economics will take care of this over time and fishing behaviour will change accordingly.

Some members were supportive of increase in quota outside of 40m to offset lower beach price.

Klaas informed the RLRAG that in Tasmania there have been a few times we have explored management options to account for price splits/colour etc. Every time this has progressed far enough, the market would change again completely.

In summary, the RLRAG did not recommend pursuing establishment of an inshore/offshore fishery further. Maintaining flexibility for operators and allowing the economics of the fishery to determine fishing practices was preferred.

#### Action

- **Klaas to investigate for the Eastern Zone moving the 145 boundary to the 22 line and adding a line along the 149 line. Klaas to also consider the implications for assessment in moving the boundaries.**
- **Klaas to look at impacts of contracting fishery and change in catch rates through time of in-shore/off-shore stock**

## 6. OTHER BUSINESS

### 6.1 SRL update

Markus provided a paper to send out to members out of session.

#### Action:

- **Toby to circulate SRL paper on behalf of Markus**

### 6.2 WRL model development

Klaas provided an update on development of the Australian Rock Lobster (ARL) model that has been funded by Western Rock Lobster. Klaas noted a resource is working on progressing application of the model for the Victorian fishery and can present at the next RLRAG.

### 6.3 FRDC Giant Crab project update

Toby provided a brief update on progress against the FRDC giant crab data collection project.

In summary:

- In house trials at IMAS have been completed.
- Fishers are actively involved in reviewing prototypes.
- Model training continues to determine accurate sex/ length measurements.
- A central data storage location has been established.
- Trial of prototype on IMAS vessels and select industry vessels will occur from November-April before second round of refinement and wider trial.

Toby to circulate milestone update when approved by FRDC.

## **6.4 Scheduled meetings**

The next RLAG meeting has been scheduled for 2 December 2021.

Meeting concluded at 1.15pm.