

RECORD OF MEETING

Meeting #22, 13 December 2018
Queenscliff

CHAIR: Ian Knuckey

MEETING COMMENCED: 9:30am

1. PRELIMINARIES

Present	
Ian Knuckey	Chair
Johnathon Davey	Seafood Industry Victoria (SIV) representative
Ross Bromley	Industry Representative
Mark Peychers	Industry member
Klaas Hartmann	Institute of Marine and Antarctic Studies (IMAS)
Rohan Henry	Bunurong Land Council Aboriginal Land Corporation
David Reilly	Victorian Fisheries Authority
Toby Jeavons	Victorian Fisheries Authority (Executive Officer)
Russel Frost	Industry member
Wayne Dredge	Industry Member
Guests	
Corey Green	Victorian Fisheries Authority
Athol Whitten	Mezo Research
Apologies	
Caleb Gardner	Institute of Marine and Antarctic Studies (IMAS)
Anthony Olver	Industry Member
Andrew Levings	Industry member
Dallas D'Silva	Victorian Fisheries Authority
Markus Nolle	Industry member
Michael Burgess	VRFish
Gary Ryan	Industry Member

1.1 Welcome and apologies

Ian Knuckey, as Chair, stated an Acknowledged Country and welcomed members to the 22nd meeting of the Victorian Rock Lobster and Giant Crab Resource Assessment Group (RLRAG).

All persons present introduced themselves and their interests. Wayne Dredge declared his interest as an Eastern Zone Rock Lobster Fishery Access Licence Holder, Russel Frost as a Western Zone Rock Lobster Fishery Access Licence Holder, Johnathon Davey as Executive Director of Seafood Industry Victoria (SIV), Ross Bromley representing Eastern Zone quota owners through East Rock, Mark Peychers representing Eastern and Western Zone Rock Lobster Fishery Access Licence Holders through SALCO and Fiordland lobster Co., and Ian Knuckey declared potential interests including a range of research projects not directly related to the Victorian Rock lobster fishery.

1.2 Overview of meeting and adoption of agenda

The agenda was adopted with item 2.5 'Sensitivity analysis for model output variability from altering growth rates' removed and postponed until the next RLRAAG meet. Ian expressed the groups condolences to Markus Nolle and family with respect to the recent loss of Markus' father.

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 RLRAAG endorsed the minutes to record that they are a true and accurate reflection of the meeting.

The following actions remained outstanding:

- Actions relating to the monitoring of biotoxins will continue to be progressed outside of the RLRAAG. The RLRAAG recognised that the lack of traceability is a key threat with the potential to cripple the industry. Markus to undertake cost-benefit analysis of biotoxin monitoring program
- Review of industry code of practice to address pot number and soak time concerns
- Harvest strategy review – Klaas to investigate sensitivity to new growth data and recreational catch data, and plot growth estimated tagging data. Model different levels of PRI and likelihood of breaching reference points. Analyse and present alternatives with PRI uncertainty and change and rolling average approach

All other outstanding actions to be covered under Agenda items 2, 4, 7 and 8.

1.4 Membership renewal

RLRAAG membership renewal has been completed. The process involved engaging SIV to send Expressions of Interest to all licence holders and VRFish seeking nominations internally to appoint two recreational fishers. A positive response was received with more applications than available member positions. A panel was formed during November to review submissions and provide recommendation for appointment to the Chief Executive Officer, Victorian Fisheries Authority. The Terms of Reference (TOR) was expanded to include a Giant Crab Fishery entitlement holder, an additional Eastern Zone industry participant, the Executive Director of Seafood Industry Victoria (SIV) and the Chief Executive Officer of VRFish. The CEO of the VFA has now signed off the expanded TOR and initial 12-month membership for the following members:

- **Western Zone** – Russel Frost, Markus Nolle, Gary Ryan;
- **Giant Crab** – Anthony Olver
- **Eastern Zone** – Wayne Dredge, Mark Psychers, Ross Bromley
- **Recreational fishers** – Lawrence Moore, Rotating emerging leadership position (VFA and VRFish have agreed to work together to identify leaders among the dive fisheries to fill a rotating emerging leader position over the initial 12 month membership period.
- **Coastal Indigenous representative** – Rohan Henry
- **SIV/VRFish** – Johnathon Davey/Mike Burges

Unsuccessful members will have the opportunity to participate as observers over the initial 12 month period.

Action:

- **Toby to send letters of confirmation and TOR to new members.**
- **Toby to send letter of thank you to departing members**
- **Toby to send updated TOR to RLRAAG members**
- **Toby to send updated contact list of RLRAAG members**

Ian provided an overview of the TOR to new members including the role of the RLRAAG, membership responsibilities, confidentiality and membership behaviour. Those present noted that there is no current

female representation in the membership of the RLRAG. Toby outlined the proposal to seek representatives from the Women in Recreational Fishing Group (WIRF) and from the commercial sector during the initial 12 month membership period.

2. Updated Harvest Strategy Process

2.1 – Presentation of updated Harvest Strategy components

Biomass-CPUE relationship

The biomass-CPUE relationship is used to calculate the CPUE-TACC table for a given exploitation rate. The current harvest strategy uses a relationship based on biomass and CPUE data from 1978 to 2013, effectively assuming that fleet efficiency has been constant during this time. This assumption is clearly erroneous, due for example to technological changes.

The original, recent and updated time series provide different relationships between catch rate and biomass. When the exploitation rate is then applied to the various biomass-CPUE relationships the CPUE-TACC table is varied. Klaas provided clarification on the corresponding years to original, recent and updated time series as follows:

Original – 1978 – 2012

Updated – 1978 - 2016

Recent – 2000 -2016

The RLRAG recommends that the following time series provide the most accurate representation of biomass-CPUE relationship going forward:

Western Zone – Recent time series (2000 – 2016)

Eastern Zone – Updated time series (1978 – 2016)

Johnathon Davey emphasised the importance of the narrative in explaining the revised CPUE-TACC tables to industry. Johnathon suggested framing the explanation by detailing the number of options considered by the RLRAG and the steps undertaken in reworking the data to achieve better representation of biomass-CPUE relationship. Klaas agreed to assist by providing narrative justifying the revised CPUE-TACC tables. The VFA will undertake consultation with industry on the revised CPUE-TACC tables prior to progressing for VFA approval.

Ross Bromley raised concern over the representation of Eastern Zone catch rates. Ross suggested that due to the size of the Eastern Zone, the CPUE west of Port Phillip Bay is not representative of what is happening at the other end of the zone. Members of the RLRAG also expressed concern over continually moving the goal posts if the current CPUE-TACC table in the Harvest Strategy is changed annually. Consensus was reached that the revised table be 'locked in' for the remainder of the current management plan.

Members of the RLRAG requested that the concern over the recent Western Australia allocation policy announcement be noted in the minutes. Members commented that if there is a rebuild of the fishery, industry want assurance that future increases in quota will benefit fishers and quota owners. The industry does not want to be in the position of 'suffering pain' to achieve a rebuild with government only to benefit. Members requested that a safe guard be considered in the management plan to ensure that allocation among sectors is upheld under future TACC increases.

Action:

- **Toby to undertake industry consultation on recommended time series reflecting the most accurate biomass-CPUE relationship before progressing for VFA approval to lock in for remainder of current management plan**
- **Klaas to provide narrative on justification for revising CPUE-TACC tables for consultation**
- **Toby to raise allocation policy discussion with VFA**

2.2 – Lowering the WZ exploitation rates to achieve rebuild targets

Ian noted previous concerns expressed regarding the Western Zone exploitation rate achieving a rebuild and the lower Eastern Zone exploitation rate. Ian reiterated that the exploitation rates adopted in the harvest strategy were determined outside of the RLRAG by a working group.

Western Zone exploitation rate

Klaas presented the modelled trajectory of egg production, catch rates and biomass under the current exploitation rate of 32.5% resulting in a slight (with a high level of uncertainty) rebuild. Scenarios were presented under the various exploitation rates of 30%, 28% and 26% displaying the trade off between improved catch rates and catch. Klaas suggested that the current exploitation rate is likely to be too high and cannot be considered above the current rate. Klaas commented that from an economic perspective it would be preferable to reduce the exploitation rate. A decrease of the exploitation rate could be considered gradually. An overall reduction in exploitation rate will have greater short term impact and less error around rebuild projections.

Ian highlighted that the current Harvest Strategy has no provision for the rate of rebuild and industry is clear that they would like input into determining the preferred rebuild rate. Determining a reduced exploitation rate needs to be achieved through industry consultation. Johnathon Davey clearly articulated that SIV would not be supportive of a reduction in exploitation rate given the current uncertainty within the industry. Mark Peychers agreed that until access is assured, support from industry for a reduction in exploitation rate is unlikely.

Ian summarised the discussion by stating that industry is interested in a long term rebuild, the RLRAG is supportive of reducing exploitation rates in the Western Zone, however questions around security of access will impact industry willingness to consider reduced exploitation rates.

Action:

- **The RLRAG recommends that for improved catch rates and economic factors there should be a reduction in the Western Zone exploitation rate. Toby to undertake consultation following clarification on VFA access policy.**

Eastern Zone exploitation rate

Klaas presented the modelled trajectory of egg production, catch rates and biomass under the current exploitation rate of 15% achieving the rebuild target for all reference points. The scenarios show that it is possible to consider decreasing the exploitation rate for higher catch rates, and increasing the exploitation rate for higher catch in the Eastern Zone. Ross noted that the projections show that an increase in exploitation rate would result in slightly lower CPUE but significantly higher TACC. Ian suggested that there is scope to increase the exploitation rate, however Wayne Dredge stated that we will lose confidence with fishers if we start changing the Eastern Zone figures. Mark acknowledged that in initially selecting the Eastern Zone exploit rate it was clearer than the Western Zone, however questioned the short term pain in taking a TACC reduction to gain only a 16t rebuild in the future. Klaas noted that the current exploit rate achieves an increase in the TACC and CPUE.

Action:

- **Klaas to update exploitation rate graphs to focus on exploitation rates of interest (10% - 35%)**
- **Potential increase to Eastern Zone exploit rate to be considered at future RLRAGS and industry consultation**

2.3 – Eastern Zone – Vessel/ space sub zone contribution to catch rates

Klaas presented an analysis looking at the impact of new entrants and large operators on standardised catch rate in the Eastern Zone. Newer entrants (entered in the last 7 years) that are catching large numbers are the most concerning from a catch rate standardisation perspective. This is because the efficiency of fishing changes independent of biomass for new entrants. The analysis however showed that even when the newest/large catch operators are removed there is very little impact on standardised catch rate.

Wayne questioned why the analysis has not shown the impact on catch rate of removing the lowest 4 operators. Wayne suggested that the fishing practices of some operators is bringing the catch rates down. Klaas commented that the standardisation process largely takes care of non-frequent fishers and fishers with consistently lower catch rates. Ross questioned how the CPUE of different regions within the Eastern Zone are averaged across the fishery. Klaas responded that catch rates are standardised across the region and then weighted by catch for regions

Ian summarised the discussion by highlighting that the information in the Eastern Zone has far more volatility and it is a challenge to work our way through this to make decisions. The RLrag agreed that further analysis of the Eastern Zone standardised catch rate is required.

Action:

- **Klaas to undertake analysis of catch/catch rate/groupings of fishers and compare different catch rates and impact on standardised CPUE**
- **Klaas to undertake analysis of the impact of bottom 4 fishers on standardised CPUE**
- **Klaas to provide clarification on weighting by zones**

3. Recreational tagging program Season 1 summary

Toby provided a review of Season 1 data from the recreational tagging program. Key statistics from Season 1 (16 November 2017 to 14 September 2018) are as follows:

- 5378 number of fisher accounts (current)
- 1330 active participants in the fishery (Reported use of tag);
- 209 fishers signed up to the Citizen Science Program;
- 7373 tags reported as used – 3800 in the WZ and 3573 in the EZ; and
- Average weight of lobster taken through citizen science program – 1.37 kg WZ, 1.8 kg EZ
- Number of RL weighed in East was 420 and 416 in the WZ

The stock assessment process currently includes a notional recreational catch share equivalent to 5% and 10% of the TACCs for the Western Zone and Eastern Zone. For the 2017/18 season this assumes a recreational catch of 11.5t for the WZ and 5.9t for the EZ.

Through adopting the average weight of lobster taken by participants in the citizen science program, the total weight of lobster taken by the recreational sector between 16 November 2017 and 14 September 2018 was 5.2t for the WZ and 6.4t for the EZ. This equates to 2.26 percent of the 2017/18 WZ TACC and 10.84 percent of the 2017/18 EZ TACC.

Members of the RLrag suggested improving the program by including a point of landing as mandatory reporting, analysing the number of return fishers/new entrants and accounting for illegal/unreported catch.

Ian noted the benefit of having the program in place and the information to incorporate into the stock assessment discussion.

4. Monitoring program – Data summary

4.1 Update on puerulus sampling program

Dredging has now been completed at Apollo Bay and the collectors were serviced and re-located to former site in September. Puerulus were recorded during the October service. Despite this interference, across the Western Zone there has been a clear step-down trend where collection through the 1990's averaged around 1 per collector, 2009 there was a decrease to an average of 0.6 and now we are down at 0.2. Klaas commented that Tasmania has followed a similar pattern along with other states.

4.2 Update on voluntary data collection program

Four fishers (3 West, 2 East) have provided additional data over the past 12 months. The Western Zone coverage included 55 days over 179 pot lifts for 355 lobster recorded. The Eastern Zone coverage included 40 days with over 320 pot lifts for 319 lobster recorded.

The roll out of technological advancements have been delayed due to some difficulties in off-loading data from the wet tags. The issue is currently being resolved and I-pads and wets tags will be rolled out early 2019.

Action:

- **Dave to provide voluntary data participants with I-pads and wet tags when technological issues are resolved**

4.3 Data summary

Western Zone – 8600 lobsters measured

Eastern Zone – 1400 lobsters measured

Zone	Ifmeas	No. fishers	No. days	No. pots	No. lobsters
West	On-board	11	54	4246	5364
	Fixed site	6	31	1599	3321
East	Observer	5	41	2316	1212
	Fixed site	2	8	402	260

Ian noted that the data collected for this year is much better than what we have had in previous years. Significant improvement in the Eastern Zone in particular, with inclusion of Ocean Grove and Arch rock fixed site survey sites. A third Eastern Zone fixed site at Torquay was not completed due to unforeseen delays experienced by the contracted supplier in obtaining a certificate of survey and insurance for his new vessel.

5. Rock lobster stock assessment results

5.1 Presentation of 2016/17 stock assessment results

Western Zone

Klaas presented an overview of data for the Western Zone noting that there has been a slight decrease in active vessels, the average catch per vessel and number of days fished per vessel has increased slightly, overall Western Zone catch rates have improved for 2017/18 and it is likely that we are seeing a large recruitment spike growing from 2011/12 through the fishery as low PRI continues. The PRI from fixed site and observer programs is still well below the 1.81, however there is signs of a slight upward trend for 2017/18.

Klaas highlighted that catch rates in Portland and Apollo Bay have improved considerably and areas to the west of Warrnambool are showing positive signs.

Mean weight

The mean weight is supporting a strong year class coming through the fishery. Klaas noted that mean weight is commonly interpreted incorrectly and clarification of inferences drawn from mean weight should be included in the stock assessment report.

Action:

- **Klaas to include clarification of inferences around 'mean weight' in stock assessment report**

Relative abundance of recruits

There has been a decline in the model estimated recruitment to 60mm CL since 2010/11. This again indicates that the strong recruitment from 2007 to 2009 is supporting the current increase in catch rates with comparatively little recruitment since that time.

Egg production

Egg production is above the limit reference point of 20% of unfished levels and has stabilised at a higher level of 24.5% in 2017/18.

Biomass and exploitation rate

The estimated available biomass in the Western Zone decreased by 5% to 701t in 2017/18, with a corresponding exploitation rate of 32.3%.

Eastern Zone

Klaas presented an overview of data for the Eastern Zone noting that catch has been steady over the past few years, there has been an increase in the number of active vessels and increased effort required to take catch.

Klaas highlighted that catch rates have declined across the Eastern Zone. Large reduction in catch rates in the Queenscliff region, increase in catch in the Lakes Entrance region with declining standardised catch rate and San Remo region showing similar catch rates to previous year. The PRI has declined further from 0.16 to 0.10.

Mean weight

The highest mean lobster weight on record for the Eastern Zone combined with declining CPUE is indicative of a lack of recent recruitment to the legal biomass.

Relative abundance of recruits

There has been a slight upturn in the model estimated recruitment to 60mm CL. Klaas noted a disclaimer around the high level of uncertainty of recent data points.

Egg production

Egg production has declined since 2013/14 to 34%, this is however well above the limit reference point of 20% of unfished levels.

Biomass and exploitation rate

The exploitation rate for the Eastern Zone has increased to 25.9% as a result of the decreased biomass of 201t in 2017/18.

Action:

- Klaas to include tables in stock assessment report that show total numbers of records, filters applied and corresponding CPUE values
- Klaas to clarify nominal CPUE value vs Standardised
- Klaas to include 'PFN' rather than 'Active vessels' in table
- Klaas to update PRI value in EZ stock assessment report (2016/17 value currently shown)
- Klaas to include limitations of Eastern Zone data in executive summary

5.2 Consideration of results and sector perspectives

Western Zone

Russel suggested that catch landed at areas other than Warrnambool has resulted in increased CPUE and that the 20t left in the water from Origin may also be impacting the current catch rate improvement.

Klaas noted that by adopting the virgin egg production levels the aggregate egg production value across Vic/Tas and SA would have dropped below 20%.

Eastern Zone

Wayne noted his concern over some areas in the Eastern Zone, however other areas that are showing positive signs. Wayne expressed concern over 'big hole' in the Eastern Zone PRI index. The PRI East of Wilsons Promontory has not been captured. Klaas acknowledged the challenges presented by the large area and limited data in the Eastern Zone. Klaas suggested that the model is only as good as the data going into it and collecting more data in the Eastern Zone would enhance reliability of the model output.

Wayne noted a further consideration with making inferences from mean weight in that most of the rock lobster from 2015 have not shelled due to cooler water temps and that these rock lobster weigh a lot more than newly shelled lobster.

Ross questioned the weighting of data from different areas of the fishery and the reliability in providing representation of areas large distances from where data is collected. Ross also questioned the relationship between fishing pressure and declining biomass. Ian noted that the fishery has withstood higher exploitation rates previously and that factors other than fishing pressure are holding the Eastern Zone back. Ian also noted that this decline is consistent across other jurisdictions and fisheries despite lower levels of fishing effort.

Members noted the context shift that is occurring with Wayne commenting on the impact of climate change that fishers are seeing through increased numbers of Eastern rock lobster and observing manta rays. Ian commented that Rock lobster are in the top 10 most affected species by climate change.

RLRAG members expressed serious concern over the declining catch rates and the resulting in health/social/economic implications from the TACC level suggested by applying the principles of the Harvest Strategy. Members questioned the proposed 45% reduction to only achieve a future rebuild of 15t from current TACC levels. David Reilly commented that the Western Zone has had TACC reduction of 50%, which has not occurred in the Eastern Zone, and this would result in a TACC at 30t. Russel commented that halving the TACC would cripple the industry.

Wayne expressed concern that under the management plan, if a TACC cuts occurs, it will be difficult to again get an increase due to the PRI. Wayne requested the ability to amend the Harvest Strategy to allow for consecutive CPUE increases to override the PRI limiting a TACC increase. Klaas noted that PRI levels are constant at all levels through the TACC tables and this may need to be adjusted.

Overall, the RLRAG has serious concerns around the fundamental long term trends in the Eastern Zone. The serious implications of a significant TACC reduction require SIV/VRLA/VFA discussions in light of further

analysis of Eastern Zone catch rate to determine 2019/20 TACC. A partial year standardised catch rate value including November/December/January will also be included in future discussions.

Action:

- Klaas to analyse weighting of catch rate/LF data adopted by model and articulate sensitivities/strengths/weaknesses
- Klaas to explore alternative exploitation rate and review potential for differing PRI levels associated with TACC table
- Klaas to determine summer standardised catch rate value to inform further discussion
- Toby to arrange Eastern Zone workshop and SIV/VRLA/VFA meeting early 2019 to discuss Eastern Zone situation

5.3 Application of Harvest strategy

Western Zone

Decision Rule	2017/18 Stock Indicator Level	Outcome
1. Egg Production		
Is the model estimated egg production above the limit reference point of 20% of unfished levels?	The 2017/18 egg production level is estimated at 24.5% of unfished levels.	Decision rule has been met. Go to Rule 2
2. TACC Determination		
a. What is the standardised CPUE relative to the preceding season	Standardised CPUE is 0.62kg/pot-lift in 2017/18	Standardised CPUE has increased from 0.54 in 2016/17 to 0.62 in 2017/18
b. Is the 2017/18 PRI at or above the reference point of 1.81 undersize/pot-lift?	The PRI is 1.37 undersize/pot lift	Decision rule not met. No further decision rules considered
RESULT		NO INCREASE IN TACC

Establishing the WZ TACC for 2019/20

The rationale and steps taken by the RLRAG to recommend the 2019/20 TACC is as follows:

- Implement the 2000 to 2016 CPUE-Biomass relationship
- Whilst CPUE has increased, the PRI remains below the reference point, therefore the TACC will stay in this same band
- 246t is the corresponding band level at commencement of the Harvest Strategy when CPUE was 0.54kg/pot lift
- A 245t TACC was adopted at commencement of Harvest Strategy and not 271t, this was because of 230t TACC at the time, low PRI value, landing on the TACC and the 'one-jump' rule

A TACC of 246t for the 2019/20 season is recommended.

Action:

- Toby to undertake consultation on adopting virgin egg production level and implementing 2000 – 2016 catch rate/ biomass relationship
- Klaas to include updated TACC-CPUE table in Harvest Strategy following VFA approval

Eastern Zone Fishery

Decision Rule	2017/18 Stock Indicator Level	Outcome
1. <u>Egg Production</u> Is the model estimated egg production above the limit reference point of 20% of unfished levels?	The 2017/18 egg production level is estimated at 33.8% of unfished levels.	Decision rule has been met. Go to Rule 2
2. <u>TACC Determination</u> a. What is the standardised CPUE relative to the preceding season	Standardised CPUE is 0.36kg/pot-lift in 2017/18	Standardised CPUE has decreased from 0.45 in 2016/17 to 0.36 in 2017/18 thereby shifting to a lower CPUE band
b. Is the 2017/18 PRI at or above the reference point of 0.32 undersize/pot-lift?	The PRI is 0.10 undersize/pot lift	Decision rule not met. No further decision rules considered
RESULT		SET TACC AT CPUE RANGE 0.35 - <0.375

Establishing the EZ TACC for 2019/20

The rationale and steps taken by the RLRAG to recommend the 2019/20 TACC is as follows:

- As the CPUE for the assessment period has decreased, the TACC is set based on the CPUE band and corresponding level.
- Adopting the 1978 to 2016 CPUE-Biomass relationship to determine corresponding TACC level
- TACC level of 21t corresponds to CPUE of 0.36kg/pot lift

A TACC of 21t for the 2019/20 season is determined by applying the principles of the Harvest strategy under the updated TACC-CPUE table, however further analysis of the Eastern Zone catch rate is required prior to making recommendation for the 2019/20 TACC.

Action:

- **Toby to undertake consultation on implementing 1978 – 2016 catch rate/ biomass relationship**
- **Klaas to include updated TACC-CPUE table in harvest strategy following VFA approval**

6. Giant Crab stock assessment results

6.1 Presentation of 2016/17 stock assessment results

Klaas presented an overview of the data from the Giant Crab Fishery for 2017/18. The total allowable commercial catch (TACC) for giant crab was 10.5 tonnes. The total landed catch was 10.3 tonnes, which was almost entirely targeted.

The targeted catch rate in 2017/18 was 1.31 kg/24 hour pot-lift, which is above the limit reference point of 0.52 kg/24 hour pot-lift for the fishery.

The average size and mean weight has remained relatively constant since 2006/07.

6.2 Consideration of results and sector perspectives

Majority of catch taken by 1 operator and very limited data available to assess the status of the fishery. Russel suggested that RL fishers have the ability to record giant crab catch in their logbooks when they occasionally show. Russel noted that there has been some bycatch of giant crab over the past 12 months anecdotally reported by RL fishers.

An outcome of the Tri-state giant crab workshop is to improve data collection in giant crab fisheries across the jurisdictions. A proposed Tri-state FRDC data collection project will be undertaken in early 2019. Following this, the improved data will support development of a new giant crab Harvest strategy in 2019.

6.3 Application of Harvest strategy

The Harvest strategy does not outline provisions for increasing the TACC. Whilst CPUE is trending upward and well above the limit reference point, the limited data available to assess the stock requires a precautionary approach to be undertaken in setting the TACC.

The RLRAG recommends the 2019/20 TACC remains at 10.5t.

7. Modernising the stock assessment tools in the rock lobster fishery

7.1 Review of new model features and demonstration of easily identifiable model settings

Athol demonstrated the automation process of incorporating new data and viewing in AVIS. The RLRAG requested that Athol focused on presenting Eastern Zone standardised catch rate and the AVIS system demonstrated the ability to easily 'turn off/on' different regions within the eastern Zone. Klaas noted that the public viewing of AVIS on the webpage will have holes in it as the data will be required to be filtered in applying the 5 fisher confidentiality rule. The only remaining setback in AVIS going 'live' is applying the 5 fisher rule to the public viewing web page version.

Athol also demonstrated the ability for auto report generation into a word document for stock assessments.

7.2 Model comparisons – 16/17 and 17/18 raw data

Athol provided an update on progressing towards undertaking model comparisons. Athol has now matched the inputs/outputs of the current models population dynamics. The new modelling is using real LF/growth data and matching completely with current model. Athol expressed the challenges in translating the existing model and he will continue to work on this with model comparisons to be available in late January 2019.

7.3 Handover documentation review

Athol presented a copy of the draft handover documentation including final project report and technical documentation to enable effective handover to VFA stock assessment provider. The documentation will continue to be developed as Athol progresses completion of the project.

7.4 Scenario testing

Athol is continuing to progress the ability to demonstrate a 'current scenario need' in rock lobster reseeded. Athol has been requested to provide a number of reseeded scenarios and model the resulting potential increases to biomass. The ability to provide scenarios for impact of size limit changes and closures is still in development.

Action:

- **Klaas to provide filtered data for public AVIS viewing on webpage**
- **Athol to complete new model beginning of 2019**
- **Athol to complete handover documentation beginning of 2019**
- **Athol to complete scenario testing beginning of 2019**
- **Athol/VFA to make AVIS live beginning 2019**
- **Tobv to seek advice on VFA discretion of public availability of R-code**

8. Other business

8.1 SRL RD&E update

In the absence of Markus, Toby provided a brief SRL update. A meeting was held on November 13 in Melbourne. Progress reports were provided against a number of projects and emerging research needs and priorities were noted for progression to the SRL board.

8.2 RLRAG workplan for 2019

The draft RLRAG workplan was presented and members provided input into amending and reviewing content. Planning and commencement of data collection to support development of an MEY over the course of the management plan has been added to the 2019 workplan. Ian noted that Julian Morrison (EconSearch) could provide support in guiding development of an MEY.

Action:

- **Toby to include access and security as agenda item at TACC port visits**

8.3 Tri-state giant crab workshop summary

Toby provided a summary of the outcomes from the Tri-state giant Crab workshop as follows:

- South Australia – TACC of 21.1t. Declining CPUE, stock status classified as sustainable, new Harvest Strategy implemented
- Tasmania – TACC of 20.7t. Stock status classified as depleted, declining CPUE trend
- Data collection in the giant crab fishery - Data collection across all jurisdictions is lacking. Development of a research proposal to facilitate collection of data by fishers in Tasmania, Victoria and South Australia testing the feasibility of new technologies to be developed early 2019.
- Trawl impact on giant crab fishery - Industry have raised concerns about trawl impact on GCF in all three states related to habitat loss and lost gear. Previous actions to develop codes of practice and marking GCF gear has been ineffective. It is not possible to quantify of level of GC mortality through trawling. This issue identifies a research need, however such research would be expensive and needs support of trawl industry. IMAS has looked at overlap between GCF and trawl fishery. Roland Pitcher et al has estimated important bryozoan habitat overlapping with trawl area and noted there is low levels of regeneration of these habitats. Tasmania will investigate finer scale assessment of trawl impact in Western Tasmanian waters.

Meeting concluded: 5:00pm

