

### RECORD OF MEETING

Meeting #35, 19 July 2022 Swan Bay room, Queenscliff

**CHAIR:** Ian Knuckey

**MEETING COMMENCED:** 9:45am

## 1. PRELIMINARIES

Present	
Ian Knuckey	Chair
Toby Jeavons	Victorian Fisheries Authority (Executive Officer)
Klaas Hartmann	Institute of Marine and Antarctic Studies (IMAS)
David Reilly	Victorian Fisheries Authority
Lachlan Smith	Victorian Fisheries Authority
Lawrence Moore	Recreational fishing representative/ VRFish
Alex Haberfield	Industry member
Wayne Dredge	Industry member
Ross Bromley	Industry member (Eastrock)
Garry Ryan	Industry member
Mathew Harry	Industry member
Zeb Johnston	Industry member
Robert Timmers	Recreational fishing representative/ VRFish
Guests	
Callum McCarthy	Industry member
Apologies	
Chris Padovani	Seafood Industry Victoria
Joanne Butterworth-	Seafood Industry Victoria
Ben Scullin	VRFish
Peter Galvin	VRFish
Craig Starrit	Scuba Divers Federation Victoria (SDFV)
Rohan Henry	Independent coastal indigenous representative
Matt Phillips	Industry member
Anthony Ciconte	Giant Crab Industry Member
George Brocklesby	Industry Observer
Rafael Leon	Institute of Marine and Antarctic Studies (IMAS)
Caleb Gardner	Institute of Marine and Antarctic Studies (IMAS)
Steven Rust	Institute of Marine and Antarctic Studies (IMAS)

### 1.1. Welcome

Ian Knuckey, as Chair, stated an Acknowledgement of Country and welcomed members and guests to the 35th meeting of the Victorian Rock Lobster and Giant Crab Resource Assessment Group (RLRAG). Toby noted the apologies to the meeting. All people present introduced themselves and stated any conflict of interest. Ian noted discussion held at the RLRAG is confidential until released to public via meeting minutes published on the VFA webpage. Ian noted that people may be asked to leave the room during discussions where a conflict of interest is identified. Ian advised the group that unfortunately Rohan Henry has withdrawn from the RAG due to other commitments.

## 1.2. Adoption of agenda

The agenda was adopted with one change made - Matt Harry had advised prior to the meeting that he was no longer on the Southern Rock Lobster (SRL) or Seafood Industry Victoria (SIV) boards and so could not provide any updates on matters relating to either party or on their behalf.

## 1.3. Minutes and actions from last meeting

Minutes from last meeting were accepted as true and correct. Toby ran through the action list and confirmed a number of the actions relating to the harvest strategy review have been or are being ticked off through this meeting and through the management plan Steering Committee.

In discussing data collection, an industry member suggested that rather than recording 'hard' or 'soft' shell condition we should be recording 'pre-moult' or 'post-moult' (or alternatively 'new shell' or 'old shell') to avoid any confusion. It was agreed that this would be considered further and photos could be provided to support the revised terminology.

**Action** – Matt to send Dave pre and post-moult images for observer data recording sheets.

Dave (VFA) gave an update on the new puerulus collection method trial where he is working with a team of Landcare volunteers in Apollo Bay. He advised that the collectors are checked once a month on a full moon. They are pulled up and cleaned, however it may be possible to look at acoustic release down the track if proven successful and there is justification. Dave advised that the citizen science trial is going well and also thinks that in Apollo Bay there are good signs of recent recruitment. He noted there is potential to open this trial up to other areas if successful and advised that in about 6 months we will be in a better position for the RAG to discuss the importance of the old collectors. It was clarified that the location of collectors do not necessarily need to be out in a reef, but should be near rock lobster habitat and where fishing occurs. It was also noted that there can be issues having collectors on pier structures including gaining permission and potential for tampering.

An industry member gave an update on the FRDC giant crab data collection project in which there are trials happening using stereoscopic cameras that can estimate length and sex of a giant crab. This has the potential to remove the need for onboard observers in future. They noted they had seen good numbers of giant crab recently. The use of the camera set up is currently slowing down the usual data recording process a lot (adding about 20 minutes onto a trip), however they advised when they go to a 3D camera (instead of 2D) this will speed up (and is expected to only add 5 minutes to a trip). Toby acknowledged that they are working with a prototype currently and is thankful for industry's support as this project progresses.

Further actions arising from Meeting 35 and the status of existing actions are outlined in the attached 'Actions List' circulated with the meeting minutes.

## 2. MANAGEMENT UPDATE

Toby noted the Rock Lobster Management Plan Review Steering Committee was set to meet the day after this meeting with key topics including resource allocation on the agenda.

### 2.1 Stock assessment contract update

Toby advised that the procurement process for the Victorian rock lobster and giant crab stock assessment contract has been finalised. This was a competitive process with some very good candidates however IMAS has been successful in obtaining the contract and therefore continuing in this space. Toby confirmed this contract is set up to cover a minimum of one year, but up to three years with extension options in place for years two and three.

## 3 Harvest Strategy

### 3.1 Recap of progress in reviewing Harvest Strategy

Klaas provided an overview of the agreed rationale in altering the Target Reference Point (TRP) to 28% and 28.8% for the Western Zone (WZ) and Eastern Zone (EZ) respectively, rather than 40%. This is based on productivity shifts likely associated with changing oceanic conditions (likely linked to climate change). Klaas also noted at the last Rock Lobster Management Plan Review Steering Committee (RLMPRSC) meeting that the more recent recruitment average (2008-2015) is proposed to be used for projections as this is more precautionary and reflects recent step-down in recruitment levels. This is considered appropriate given the signs of climate change impacting south-eastern Australian fisheries identified through CSIRO research. Klaas presented the key excerpts from the Marine Stewardship Council (MSC) certification process relevant to adjusting reference points due to productivity shifts. Ian advised that this is a point that will be focused in on and is likely to attract attention, so it is important we set out clearly the strong justification as to pursuing those agreed rebuilding targets. Klaas also noted the decisions at RLRAG 34 and RLMPSC 6 meetings to retain the core structure of the harvest control rules in the harvest strategy including:

- CPUE-TACC tables
- Pre-recruit Index (PRI) rule
- Reducing exploitation rates with decreasing CPUE

He noted this retains simplicity and transparency at the cost of not making the best use of the collected data and assessment methods. Klaas presented examples of the CPUE-TACC tables that meet the required target rebuild. It was clarified that the proposed cap that was discussed at the RLMPRSC for each zone was 240t for the WZ and 39t for the EZ to meet the rebuild. An error in the draft RLMPRSC meeting #6 minutes was identified and will be corrected.

**Action** - Lachlan to rectify error in draft minutes for RLMPSC #6 for proposed WZ cap so it is 240t as was discussed (not 232t)

It was questioned whether the proposed new TRP's for the rebuild will still reflect maximum sustainable yield. Klaas advised that this assumption is correct, but noted it is an evolving space. It was noted that AMCS had previously raised concerns that productivity may keep changing and therefore change the targets.

A member advised SRL is actively considering MSC certification as a priority for the rock lobster stock and this is likely to be a top priority in its next strategic plan. It is understood that all other jurisdictions would largely meet the standard and can satisfy the requirements without too much additional burden. It was acknowledged that if this goes ahead, Victoria would not be pursuing MSC certification alone and this would be critical for potential market access into Europe. It is understood that Eastern Rock Lobster in NSW have recently submitted an application for MSC certification.

In discussing the TACC tables, a member questioned whether a subset of the inshore summer catch rate could be used instead of industry having to wait for the standardised catch rates for the full season as it would allow industry to be more reactive. There were mixed views on this option as it was acknowledged this would be less reliable as it would not utilize the full dataset, however Klaas advised he would show how this actually compared over past years to support further discussion.

**Action** – Klaas to prepare comparative analysis of a subset of the season’s data (including December, January, February in less than 40m of water i.e inshore, summer months) to the annual nominal/standardised catch rates.

### 3.2 Review of upper and lower reference points – Are they still correct?

Klaas noted that the CPUE-TACC tables are based on an exploitation rate that is 0 at 0.25kg/potlift and increases to its maximum value at 0.4kg/potlift. It is understood that this lower limit reference point may have been originally chosen at a point (and time) where fishing below this level was judged to be generally not financially viable below. The group were less clear what the upper limit reference point of 0.4kg/potlift was originally based on. Klaas noted that reducing the exploitation rate as the limit reference point is approached is a sensible precautionary management approach and is required by the MSC standard. However, the current levels are not based specifically on the relative biomass reference points. In particular

- 0.25kg/potlift corresponds to <10% of virgin legal size biomass levels
- 0.4kg / potlift corresponds to <20% of virgin legal size biomass levels  
(noting that % of virgin legal size biomass is different to exploitation rate)

Klaas advised it would be desirable to set the exploitation rate at 0 at the CPUE level expected when egg production is 20% (which is a LRP for the fishery). However, this is not straightforward as the CPUE-TACC table is based on exploitable biomass, whilst the limit reference point is based on egg production (noting that egg production depends on female biomass including a substantial proportion of sublegal animals). Nevertheless, he noted an approximation based on expected average future population demographics could be developed. He noted that it is less clear what the upper limit for the exploitation rate increase (currently 0.4kg/CPUE) should be set at. Klaas noted there an interaction between this upper limit, the maximum exploitation rate and the TACC cap.

The Chair sought feedback from the group and **there was clear consensus that the lower limit reference point should be better aligned with the LRP for egg production in the revised harvest strategy, particularly if it may be subject to scrutiny under potential future fishery accreditation processes. The group also agreed that the scaling down of the exploitation rate should be more stretched out (over a larger range of CPUE) and align with a revised upper limit reference point in the harvest strategy which will mean being more reactive and better protect the fishery from reaching LRP (both in terms of catch rate and egg production). There was consensus that the CPUE bands should also reflect the planned rebuild with the higher CPUE values presented.**

**Action** – Klaas to present relationship between egg production and CPUE at next RAG to support a recommendation on revising the current LRP of 0.25kg/potlift.

**Action** – Klaas to investigate a revised upper limit reference point. This should be towards the target but somewhat below it to avoid natural fluctuations in the fishery causing the fishery to frequently fall below the reference point.

**Action** - Klaas to update the TACC table and exploitation graph so that these incorporate higher catch rate bands relevant to when the stock is expected to see progress in the planned rebuild.

The Chair noted that at the next RL RAG, the group should be in a position to provide a recommendation on the lower limit reference point and the upper limit reference point for the standardized CPUE.

### 3.3 Reviewing CPUE band increments and ensuring they reflect target exploitation rate at the bottom of each band

Klaas noted that industry has expressed some concern regarding the CPUE bands and whether the target exploitation rate is exceeded at the lower end of each band. He advised that in practice this is what happens by design and the CPUE-TACC tables have been based on matching the exploitation rate at the mid-point of each CPUE band. Whilst this may seem concerning, the exploitation rates have been selected by modelling the performance of the CPUE-TACC table derived from them in that manner, and so this aspect has been appropriately considered. Klaas also noted that the CPUE bands are narrow, which means they require a level of precision that is less than the normal variability in CPUE that has been observed. In practice this volatility is limited by the harvest control rule which stipulates only allowing the TACC to increase by a single band in a given year (i.e. the 'one jump rule'). Klaas suggested these bands could be revised to see if they could become larger. Following discussion around the table, **there was consensus to keep the width of the bands the same or similar as it is more precautionary to have narrower steps below the constant harvest rate and in light of the fact they are designed around the mid-point of each band.**

There was discussion around whether it was worthwhile having the low TACC recommendations at a point where fishing is marginally financial and whether if it ever got to that point that the fishery should instead just be closed. One member advised in their view that anything less than 0.3 kg/pot lift could be appropriate. However, it was noted that some data is needed in such scenarios to provide information on fishery recovery (e.g. a research TAC could be implemented). **There was consensus to keep the lower bands with the smaller steps down to 0.**

An eastern zone industry member had queried whether it was possible to see a few more steps in the green zone for the TACC table. Klaas advised he would come up with a few options to set the proposed 40t cap at a few different levels.

**Action** – Klaas to consider options shift TACC cap by increasing upper trigger

Ian thanked the group for the discussion and noted that Klaas now has the guidance to undertake the further analysis and present at the next RLRAG meeting whereby the group will be in a better position to make final recommendations on what the revised TACC/CPUE table may look like.

## 4. PRI review (for discussion)

### 4.1 Review current threshold level of PRI based on adjusted recruitment average

Currently, under the existing harvest strategy, in order to receive an increase in TACC the annual PRI must be above the PRI threshold set for each zone. Additionally, the TACC can only be increased by one level at any time ('one-jump rule'). This has been beneficial as recruitment has been low for an extended period and with target exploitation rates of 20.5% (EZ) and 26.3% (WZ), sustained low recruitment can rapidly result in substantial CPUE decline. Whilst low PRI prevents TACC increases it does not force a TACC decrease.

Klaas noted that when looking at the historical data and TACC increases that were prevented based on the existing PRI threshold, it appears the rule has worked well and has been beneficial for the stock. As such the PRI threshold at the current level appears reasonable. Given the high stochasticity of the PRI and the difficulty of formally evaluating it in the evaluation of the harvest control rule, it is likely that any future variations will be based on expert evaluation of the appropriateness of the reference period and reference level. Klaas provided background on how the current reference period and level were set and sought feedback on whether these are still appropriate. The Chair noted a decision will need to be made on a potentially revised reference period and where the PRI threshold is set in the revised harvest strategy based on the most recent time series and that this decision did not need to be made today. An industry member suggested that the reference period (once chosen) should be locked in for the life of the management plan (e.g. 5 years).

**Action** – Klaas to provide advice on revised threshold level based on the most recent time series and present at next RAG.

## 4.2 Consideration of decreasing PRI resulting in decision rule to decrease TACC

Klaas presented examples where the CPUE decreased (e.g. as experienced in the late 2000s) due to low recruitment and resultant TACC reductions which were too slow. If something like this recurred, the CPUE-TACC table would result in similarly delayed and large TACC reductions which is not desirable, and the earlier warning signs provided by the PRI would not have forced earlier TACC reductions. Klaas noted that it may be desirable for a low PRI to result in a TACC decrease. For example, with the current harvest control rule in the Western Zone, if the TACC were hypothetically at 300t then a record low PRI would not result in a TACC decrease. He noted that the RAG has looked at including some variable PRI thresholds in the Harvest Strategy in the past but did not proceed. Klaas questioned the group whether they were happy with the current use of PRI or if potentially increasing the level of complexity should be re-visited as it may be beneficial in the revised harvest strategy. He noted that formalising a rule for TACC reductions on the basis of low PRI is challenging due to the high variability of PRI and that the PRI threshold for a TACC reduction is likely required to be linked to the TACC itself. There was some hesitancy from industry members in relying on a PRI measure to influence the setting of TACC. It was acknowledged, however, that there was sense in having a set PRI threshold.

The chair sought consensus on whether people would be willing to drop the TACC based on PRI alone. **There was consensus that TACC should not be reduced due to a single year only of PRI being below the threshold, noting that PRI may not be the most precise measure and whatever we do the catch rate tables will be designed to get us to the rebuild target by the timeframe. Consensus was not reached on hardwiring a new harvest control rule for a TACC decrease specific to PRI alone in circumstances where the PRI is below the agreed threshold for 2 years in a row. However, there was agreement from the RAG to adopt measures whereby if PRI is below the threshold for 2 years in a row, it would be discussed at RLRAG and a TACC reduction is then considered in line with how the rebuild is progressing at that time.**

**Consensus was reached for a TACC increase only being applied if the PRI is above an agreed threshold for 2 years in a row (where supported by the appropriate CPUE) to prevent the TACCs from jumping around.** It was clarified that under this arrangement the fishery could still get TACC increases year-on-year, but as soon as PRI drops below the threshold, the rule would take effect and there wouldn't be an increase again until it was above the threshold for 2 years in a row. Klaas clarified that PRI incorporates multiple year classes of undersize lobster and that the lag between PRI and legal size can be 4-5 years.

**Action** – Klaas/Toby to incorporate the 2-year PRI safeguard for TACC increases as a new harvest control rule in the revised harvest strategy. This will also note the RAG will provide a recommendation on potential TACC reductions if PRI is below the threshold 2 years in a row.

## 4.3 Exploring PRI weighting – Clarifying comparisons with industry observations

Klaas presented an alternative harvest control rule relating to PRI whereby there could be an index weighted by the TACC. This approach involves a comparison of the ratio between the PRI and the TACC under consideration. If PRI is above a certain ratio the TACC may be increased (if CPUE permits), if it is below a certain ratio it forces a decrease. Between these ratios no action is required (unless CPUE requires it).

Following discussion there was agreement to keep a fixed PRI threshold and not have a sliding scale. There was also agreement to revise the reference period that considers the drop in total TACC cap.

**Action** – Klaas to revise reference period that takes into account drop in total TACC cap.

## 5. Continual improvement (for consideration)

Due to time constraints the agenda items 5.1 (considering a vessel efficiency factor), 5.2 (Australian lobster model) were not discussed and were pushed to the next RLIRAG meeting. In regards to item 5.3 (considering weather impacts on catch rates), the Chair asked members to send through details on their assumptions (e.g. what wind strength, swell, height and direction) to Klaas as detailed in the actions list for discussion at next meeting.

**Action** - Call to industry members to send Klaas details on weather factors (e.g. what wind strength, swell, height and direction) that impact their catch rates.

### 5.4 Strategic Plan for tag recapture program

Klaas noted there are some potential future research projects and sought preliminary feedback from the group to help inform future project proposals:

1. *Potential FRDC project being put forward by Caleb Gardner (IMAS) regarding the trade-off between costs and management outcomes (e.g. a more precautionary harvest strategy and possibly lower TACC but less management costs born by industry)*

Industry was of the view that it appears the industry is heading that way anyway. Industry was invited to approach Klaas to discuss scenarios that could be investigated to reduce management/research costs.

2. Potential tag-recapture project to inform knowledge of growth rates and how these change across the stock. Knowledge gap with growth rates of larger lobster.

There was some support for a web-based tagging system, however Toby noted that it is not preferable to have multiple reporting systems and this would ideally sit within Vic-ecatch to avoid additional burden.

3. *SRL ageing project* – this would be a close-kin project whereby we would be watching parents to offspring across jurisdictions to inform connectivity. It requires having a set of known age lobsters across a range of environmental conditions and regions with differing growth rates to enable calibration of aging method.

## 6. Other business

The Chair reiterated that item 6.1 (SRL/SIV update) was no longer to be spoken to be Matt for reasons detailed earlier. It was noted that SIV is currently looking to set up a rock lobster sub-committee. It was also advised that SRL are currently looking for a Victorian representative for the SRL Board and anyone interested should reach out. Item 6.2 (trade discussion) was to be picked up at the RLMPRSC meeting the following day instead.

The Chair closed by thanking members for their efforts in joining for this discussion and concluded the 35th Rock Lobster Resource Assessment Group meeting.

**Action** – Lachlan to send out invites for next meeting date (action now complete).