

Attendees

Chair: Ian Cartwright

Eastern Zone Abalone Industry Association (EZAIA): Helen Jenkins, Joe Peel, Mike Minehan, Chris Wright, Reinhard Strauss, Karl Brown, Ross Davis, Jason York, Cameron Armstrong, Judy Davis, John Minehan, Brendan Wadsworth, Jayde Theodore, Rob O'Neill, Darren Joiner, Donald Hayes, Brenda O'Neill

Victorian Fisheries Authority (VFA): Travis Baulch, Mark Asplin, Justin Bell, Trudy Schmidt

MRAG Asia Pacific: Cameron Dixon; via WebEx: Cathy Dichmont (CDC Consulting) & Joanne Potts (The Analytical Edge).

Apologies: Chris Daniel, John Armstrong, Gerhard Hupfau, John O'Neill, Rae Strauss, Cody Winward, Clyde Thomas.

Executive Summary

The meeting agreed on a recommendation for the 2021/22 total allowable commercial catch (TACC) for the Eastern Abalone Zone (EZ). Participation of stakeholders through the meeting was constructive and discussions were based on scientific advice, diver observations and catch management considerations within the zone. The recommendation was arrived at by agreeing on an optimal target catch for each spatial management unit (SMU), under a process facilitated by an Independent Chair.

A total of optimum catch targets at SMU level, based on scientific data, diver observations and catch management decisions resulted in a recommended TACC of 337.5 tonnes of blacklip abalone. It is noted that the blacklip 2021/22 TACC recommendation of the workshop is consistent with that applied during the previous season.

In addition to arriving at a TACC, the carryover of uncaught quota from the 2020/21 to the 2021/22 quota period was discussed. The specific legal instrument enabling the previous year's carry over and the additional instrument/actions that would be necessary for any future carry over were described.

The VFA is also required to consider the information received during the consultation process, before a final TACC decision is taken by the Minister's delegate, the Chief Executive Officer, VFA.

Table 1. Proposed 2021/22 TACC, SMU and size limits

SMU	Reef codes	Size Limit	Lower limit	Lower threshold	Target	Upper threshold	Upper limit
Marlo	21.00 – 23.01	120	50.1	60.8	71.5	82.2	93.0
Mallacoota West	23.02 – 23.05	125	32.9	40.0	47.0	54.1	61.1
Mallacoota Large	23.06 – 24.03	135	16.5	20.0	23.5	27.0	30.6
Mallacoota Central	24.04 – 24.08	125	39.9	48.5	57.0	65.6	74.1
Mallacoota Small	24.09 & 24.14	115	14.7	17.9	21.0	24.2	27.3
Airport	24.10-24.11, 24.15-24.16, 24.21	110/120	59.5	72.2	85.0	97.8	110.5
Mallacoota East	24.17 – 24.19	120	22.7	27.6	32.5	37.4	42.3
Proposed 2020/21 TACC					337.5		

* Default 15% thresholds and 30% limits have been applied to the recommended targets

Item 1 & 2. Introduction (I Cartwright, Chair)

The Chair welcomed all attendees to the forum, outlining the tremendous challenges that have been faced by the industry and the community since the previous workshop. The Chair outlined the nature of the workshop and his intention, as has been past practice, to provide all participants with the opportunity to contribute to the TACC setting process in a respectful way, ensuring a harmonious interaction.

The Chair introduced the recently appointed Abalone Fishery Manager from the VFA, Travis Baulch. Travis introduced himself and detailed his professional experience, including dive fishery management in Tasmania. Travis outlined his intention to pursue a collaborative approach with industry and looked forward to opportunities to interact closely with industry and other fishery stakeholders.

The Chair outlined the agenda for the day, including the process utilised annually to arrive at a recommended TACC, based on a review at each reef code/spatial management unit, which informs the CEO of the VFA as the decision maker. Presentations included the stock assessment by MRAG Asia Pacific and diver observations reporting, which included 50 responses.

The Chair detailed issues for discussion relevant to the assessment process, being:

1. Indicators (harvest strategy)
 - a. Appear to be heading in different directions hence there will be some discussion around the assessment.
2. Carryover of uncaught quota
 - a. Focus of the TACC setting process to be on the status of the resource in the assessment and arriving at recommended 2021/2022 TACC that will meet the management objectives for the fishery. Any discussion or reference to uncaught quota carryover will be addressed separately.
3. New diver observations reporting platform

The Chair asked participants if there were any intentions to discuss changes to size limits for any SMU. No intention to do so was declared for the upcoming season, with agreement that any areas of interest in relation to changes to LML could be flagged for future discussion.

Other issues outlined by the floor prior to commencement included:

1. Independent survey site discussion
 - a. A question was raised as to whether this topic would be discussed.
 - b. MRAG Asia Pacific informed that some elements for discussion would be highlighted during the stock assessment presentation.
2. Collector plates
 - a. VFA to provide an update on this project.

The Chair welcomed attendees utilising the online WebEx platform to participate in the meeting.

Item 3: Vic-eCatch/Education and Enforcement Presentation (Trudy Schmidt/Mark Asplin)

Trudy provided a thorough update on the last 12 months, including many challenges. A key element of 2020 was the introduction of the new Fisheries Regulations 2019. These new regulations provided

for the implementation of electronic reporting, via Vic-eCatch, and Vessel Monitoring Systems (VMS). The exemption process for varying periods was outlined for these two initiatives, through the introductory phases.

Compliance highlights for the season included:

1. A slight drop in the level of compliance had been observed, across a range of regulatory requirements.
2. VMS process outlined to ensure VMS remains on until reporting requirements completed
3. Airport allocation – this is available via Vic-eCatch, however for those no self-reporting currently, local Fisheries Officers can be contacted and will assist as required.
4. Vic-eCatch will be mandatory in the EZ next season. A further training session/s will be planned for those not already trained.
5. Phone coverage highlighted during time when the network may be problematic. Landlines worked in some instances when mobile coverage was limited.

Mark provided an overview of the implementation of Vic-eCatch across the abalone, rock lobster and giant crab fisheries to date. It was noted that dive fisheries are relatively simple to facilitate via electronic reporting as the fishery dependent information is less complex when compared to the reporting requirements seen in other fisheries.

Specific to the EZ, around 50% of operators had undertaken voluntary online training sessions (due to COVID-19) to commence self-reporting. This was applauded as a fantastic step as it has built familiarity with the platform and eased the burden on VFA Duty Officer workloads at peak times.

Vic-eCatch currently provides for the required regulatory responsibilities of fishermen to be captured. Work has commenced on an enhancement package to provide greater capability for those at the coal face, being fishers and Fisheries Officers. This will include the ability for fishers and Fisheries Officers to create and view reports of activity based on time, area, licence, etc. It's envisaged that this will assist with a number of fisher and Fisheries Officer practices. All divers were thanked for their enthusiasm and patience with the implementation of Vic-eCatch.

Item 4: Recap and conditions from November 2019 and zonal assessment (Travis Baulch)

Travis provided an overview of the previous season from a fishery management perspective. The differing status of the fishery as represented by i) the independent survey information and ii) CPUE was noted as a significant issue. It was noted that other indicators may assist with assessment of the stock, in addition to considering market-driven fishing practices and diver habits. A workshop to investigate new approaches to standardising CPUE and other aspects of the stock assessment is to be scheduled, with a view to utilising multiple indicators to reduce overreliance on existing indicators. Current work being undertaken to evaluate harvest strategies would likely have a positive impact on Victorian fisheries.

Travis acknowledged the sacrifices and steps taken overtime to ensure the EZ fishery stays in good shape, including fishing to Optimal Targets. The nature of the stock assessment process was explained, as was the application of the uncaught quota carryover for the current season.

The Chair reiterated his intention to separate out the carryover issue, assessing the TACC setting separately such that an “in principle” position on a TACC could be reached by the meeting.

Item 5: Stock Assessment process/Draft Harvest Strategy results – MRAG

Cameron Dixon provided an overview of the stock assessment process conducted by MRAG Asia Pacific in the previous two years as the contractor providing for the stock assessment in the Eastern Abalone Zone. Cameron outlined the increasing level of familiarity with the data, processes, strengths and weaknesses, which should provide for better assessments. Year three objectives for the assessment were outlined and buy-in from industry was identified as critical to the assessment and management process. Workshopping of these key elements of the assessment was highlighted as a good approach. Some difficulties relating to the directions of the Fishery Independent Survey and CPUE (being HS indicators) were identified for discussion.

The approach in the stock assessment was outlined as follows:

- Zonal and SMU processes addressed
- Trends in performance indicators assessed
- Weight of evidence approach and draft harvest strategy outcomes.

Several uncertainties were outlined:

- LML change effects over time. Attempts will be made to include these in any standardisation development
- Standardisation of CPUE. This review is nearing completion. Currently does not appear to be broadly representative of trends in biomass
- Representative nature of the Fishery Independent Survey (FIS). Appears a poor correlation between nominal survey results and standardised CPUE. A review of the FIS and improving CPUE standardisation, are complex issues that will not be solved during the forum.

MRAG outlined a reference in the Hart Review, detailing a close positive correlation between CPUE and FIS (recruit abundance), which does not appear consistent with current situation. MRAG demonstrated the poor relationship between CPUE and the FIS as stock indicators across all SMU in the EZ, which seemed to worsen over the longer period (1992 to 2019). A clear decline in biomass has occurred in a number of Australian abalone fisheries, most recently demonstrated with the Tasmanian fishery being subject to further 100t quota reduction.

MRAG advocated for conservatism as a precaution given the situation is unclear with regard to stock status.

It was suggested from the floor that:

- urgent revision of the FIS is needed
- FIS sites could be added to more effectively represent currently fished areas
- placing FIS sites in currently fished areas may provide more stable results
- flooding at Marlo SMU had caused some declines in CPUE as nobody fished there due to ‘dirty water’ conditions
- the areas being fished are reducing in size (paddocks getting smaller)

The Chair summarised the discussion, noting that there was a strong belief among industry that the current FIS was not providing an adequate and representative indication of stock status. Industry is of the view that in general, the stock is looking good, and if CPUE drops then there are clearly issues.

MRAG presented the key performance indicators for past season. Marlo was identified as mostly under-caught. The floor informed that Marlo was under-caught due to it generally being a late season fishery and other external factors prevented divers getting there. This commentary was accepted.

At a zonal level, TACCs and catches have reduced consistently since 2012. While CPUE has increased, albeit at significantly lower levels, pre-recruit abundance continues to decline.

Several challenges prevented the usual commercial catch sampling programme from operating effectively last year. Catch sampling has reduced over time, and an emphasis should be placed in restoring and maintaining the programme. MRAG reinforced the value of size structure information to their stock assessment.

Conclusions:

1. Opposing trends in biomass and CPUE indicators
2. Neither measure appear to represent the biomass well
3. Indications that there has been a broad scale decline in abalone stock
4. Urgent need to revise the FIS
5. Efficient divers/diver behaviour provides another variable

Item 6: Diver Survey report (John Minehan)

John outlined the value of the diver survey instrument as a formalised mechanism to for including diver knowledge in the stock assessment process. It was explained that whilst diver contribution during the stock assessment workshop was of great value, a structured process provided a non-verbal alternative for many divers was necessary. Such a process would enable more divers to provide input. The design of a diver observations application for smart devices is the subject of a current project which will assist this process.

The Chair outlined the value of such a program and encouraged further participation to add weight to its value.

Item 7: SMU assessment – MRAG

Eastern Zone overview

An overview of the assessment was provided at zonal level. The Draft Harvest Strategy and subsequent catch control rules were demonstrated. (refer to **attachment 1 – MRAG presentation**)

SMU assessments

Fishery independent and dependent data were presented for each SMU and considered along with diver observations to reach consensus on the proposed 2021/22 TACC. (refer to **Table 2 SMU Breakdown – Results and Comments**)

ACTION: VFA to liaise with industry in relation to a request to formally close Big Rame reef code upon reaching its Lower Limit, a provision not currently available under the current Fisheries Notice.

Item 8: Summary and Recommendations (Ian Cartwright)

The Chair led discussions on topics highlighted at the commencement of the forum.

i. Carryover of uncaught quota

The Fishery Manager provided an explanation as to the allocated quota, which can be sustainably harvested from the previous season. He indicated that any decision regarding an allocation of additional uncaught quota to the recommended TACC in the form of a carryover would be best made later in the season, with regard to many factors including natural mortality, impaired recruitment, catch levels and spatial allocation.

MRAG provided views on the risk of carrying over quota. Risk would be reduced by the quick turnaround of new FIS sites to inform decisions. Clearly, the greater the carryover, the higher the risk in the absence of unequivocal indicators from the fishery. Some carryover of uncaught quota could be acceptable, however there is a need to trade off any higher catch with ensuring new and clearer information is obtained from fishery, including the addition of FIS sites into representative fishing areas. It was noted that carrying over a high level of uncaught quota would be extremely high-risk.

As background to inform the discussion of any hypothetical future carryover, Mark Asplin provided an overview of the Initial Abalone Quota Order (IAQO) as the legal instrument that sets the management arrangements for the abalone fishery from commencement. The subsequent amendment to the IAQO that was enabled by the Minister to facilitate uncaught quota being carried over from the 2019/20 to the 2020/21 quota period was a specific, single year provision. The IAQO is otherwise specific in its provision, it does not allow for quota to be carried from one period to another. As such, no legislative instrument currently exists to allow for carryover from the 2020/21 to 2021/22 quota period.

A general discussion and commentary from the floor was heard in relation to a potential carryover of uncaught quota. Points raised included:

- An unwillingness of divers to accept a large undercatch, for example 100t, with no carryover.
- Constraints preventing the Mallacoota abalone processor being fully functional due to bushfire damage.
- Carryover measures may be best implemented over several years.
- Reduction of licence fees in exchange for leaving uncaught quota in the water.
- The prospect of quota carried over but being unable to catch and/or process it.

The Fishery Manager noted that the previous carryover of uncaught quota from the 2019/20 period was a significant measure and any future carryover, and the associated implications for the fishery, would need careful consideration and require additional administrative processes.

The Chair summarised the discussion points raised and highlighted the clarification provided by the VFA on how the previous carryover was implemented. The Chair emphasized that this provision was finalised and any new provision would have to undergo a new process, noting that the higher the

carryover, the higher the risk. A workshop to reassess the Fishery Independent Survey is to be conducted with industry, which will include the identification of new sites.

ACTION: *VFA to liaise with industry to facilitate a workshop to investigate the Fishery Independent Survey structure.*

ii. Diver Observation – Mobile application development

John Minehan demonstrated the new mobile application for the diver observation program, explaining the relevant fields and how it is to be used. Privacy policy was discussed and how data release agreements would be used to assist the program. A comprehensive overview was provided with a presentation of the relevant screens.

iii. Juvenile Collector Plates

Justin Bell, VFA Scientist, provided an overview of how the collector plates function. Very successful recruitment on all habitats has been observed over the short life of the project. Only Island Point and Petrel Point sites were used and demonstrate these trends. Given the limited sites and duration of the project to date, conclusions cannot be drawn on broader levels of recruitment/abundance. In addition, juvenile abalone observed on the plates will take a further four to five years to recruit to the fishery. Data over an appropriate period, coupled with CPUE, may be informative in the future.

It was outlined that culling and/or translocation practices may impact results from some sites, increasing uncertainty. The plates appear to effectively demonstrate recruitment on barren areas, but once they emerge abalone are at risk of being eaten, out competed or dying due to other factors.

The Forum questioned if information from the plates could be used as a leading stock assessment indicator by providing an estimate of the recruits likely to enter the fishery, which would occur in around five years.

iv. Harvest Strategy & MSE

Cathy Dichmont provided an overview via WebEx of the project being undertaken to evaluate harvest strategies across the country. The project will be looking at all harvest strategies for abalone across the country based on the biology of Tasmanian and South Australian fisheries and includes engagement with the Abalone Council of Australia.

The EZ Draft Harvest Strategy would be tested under the project, which would assist in determining the best approach and what fix is applied to the EZ Draft Harvest Strategy. Further research projects are underway that may also be of benefit to the EZ, including a Tasmanian spatial project and a further project undertaken by Keith Sainsbury related to comparing logger, logbook and FIS information.

The Chair reinforced the need for all of these projects to be focussed on as they will feed into improved management of abalone fisheries.

v. Overall TACC comments – Cathy Dichmont

Cathy Dichmont provided a brief summary of views on the TACC setting workshop and process. Endorsement was provided for a workshop to address the conflict between indicators, however it was stressed that this needs to be actioned.

SUMMARY

The recommended 2021/22 TACC for consultation is 337.5 tonnes. This represents no change from the 2020/21 quota.

It was noted that:

- A workshop would be convened by the VFA to address contradictory indicators in the Harvest Strategy and stock assessment. This would present as a review of the Fishery Independent Survey sites for validity.
- The issue of any carryover of uncaught quota into the 2021/22 quota period would be determined outside of the stock assessment and TACC setting process, likely at a time when a clearer indication of catch levels is available.

MEETING ACTIONS:

1. ***VFA to liaise with industry in relation to a request to formally close Big Rame reef code upon reaching its Lower Limit, a provision not currently available under the current Fisheries Notice;***
2. ***VFA to liaise with industry to facilitate a workshop to investigate the Fishery Independent Survey structure.***

Table 2. SMU Breakdown – Results and Comments

Spatial Management Unit (SMU)	Catch				Harvest Strategy (HS) range		Indicators								Diver comments/Observations	Proposed 2021/22 Target
	Total catch	OT 2019/20	OT 2020/21	Catch to date 2020/21 (@01-Dec-2020)			Long-term indicators CPUE 2003/04 – 2019/20 Abundance 2003 – 2019				Short-term indicators CPUE 2009/10 – 2019/20 Abundance 2009 – 2019					
	'19/20 (t)				Min	Max	Survey Sites '03	CPUE	Pre-recruits	Recruits	Survey Sites '19	CPUE	Pre-recruits	Recruits		
Airport	84.79	90.0	85	62.34	85	106.2	11	28	-69	-69	9	21	-50	18	MRAG Summary Stable over time, increasing CPUE and minor pre-recruit increase. Difficult to support/justify an increase scientifically due to contradictory indicators. Some stability in recruit and pre-recruit abundance. VFA Comment: Status quo is good. Positive CPUE Diver Observation Program comments: Health improving, urchin culling improving some areas, stocks look good, 200kg per hour, sizes increased (Tullaberga) Forum comments: Leave it, fishing well. Consensus: Agreed. Status Quo	85t
24.10/25.10 – Little Rame Lee																
24.11/25.11 – Shipwreck – Seal Ck																
24.15/25.15 – Tullaberga Is			5t reduction													
24.16/25.16 – Gabo Harbour																
24.21/25.21 – Quarry Beach/Betka																
Marlo	55.66	71.5	71.5	29.97	67.9	75.1	20	7	-23	-68	19	4	-42	-41	MRAG Summary Varied catch over years, 16t short due to timing of fishing and other constraints last season. Stable HS outcome. VFA comment: CPUE 130 – this is a great sign to maintain this is the key. Diver Observation Program comments: Frenchs inside looks good, some environmental impositions – floods, dirty water, etc. Conran, good size and good juvenile stock. General good stock comments. Urchins an issue in some areas. Forum comments: Not fishing poorly, no need to get there due to slower fishing – market, etc during late 2019/20 period. Consensus: Agreed. Status Quo	71.5t
22.02 – French’s	3.33	6.5	6.5	1.32												
22.03 – Point Ricardo	5.89	5	5	1.88												
22.04 – Cape Conran	14.86	15	15	7.45												
22.05 – East Cape	11.03	17	17	9.45												
22.06 - Yeerung	7.48	8	8	3.58												
22.08 – Pearl Point	13.07	20	20	6.29												
Mallacoota Central	57.01	57.0	57.0	26.26	57	71.2	8	23	-53	-57	8	12	-43	-31	MRAG Summary HS indicating increasing final category due to CPUE trend despite conflicting evidence in pre-recruits and recruits longer term trends. A “steady as she goes” approach is encouraged due to conflicting indicators. VFA comment: Agreed with MRAG advice. Diver Observation Program comments: Fishing to market sizes, stocks healthy, wide stock not great. Forum comments: Leave it. Consensus: Agreed. Status quo	57t
24.04 – Red River	1.32	2	2	0.39												
24.06 – Sandpatch Point	15.84	18	18	7.32												
24.07 – Sandpatch Lee	31.40	30	30	13.67												
24.08 – Benedore	8.45	7	7	4.88												

Mallacoota West	47.32	47.0	47.0	22.69	44.6	49.4	7	27	-49	-46	7	10	-37	26	<u>MRAG Summary</u> Some stability in recruits. CPUE increasing, pre-recruits decreasing – HS stable outcome. Suggest status quo approach. VFA comment: Agreed with MRAG advice. Diver Observation Program comments: 4 comments only – fishing to market hitting CPUE. Urchin cull areas look good. Fishing well. Forum comments: Fishing well. Consensus: Agreed. Status quo	47t
23.02 - Whaleback	5.85	8	8	4.04												
23.03 - Mueller	5.73	6	6	1.41												
23.04 – Petrel Point	20.63	15	18	8.97												
23.05 – Island Point	15.11	18	15	8.27												
Mallacoota East	35.4	35.5	32.5	27.34	32.5	40.6	5	21	-52	-51	4	8	-50	-10	<u>MRAG Summary</u> Pre-recruits at lowest levels. CPUE increasing, Pre-recruits are steady recently – stable. HS suggest could take increase, status quo is recommended though. VFA comment: Agreed with MRAG advice. Diver Observation Program comments: Weed cover starting to recover - Gunshot Forum comments: Took some off previous year – Gabo Island. Gunshot looking good. Good feedback. Iron Prince had to swim a bit. Discussion around industry led reductions last year due to legal action and not stock assessment outcomes. Last year’s undertaking was revisited and VFA undertaking to reconsider maintained. Consensus: Agreed. Status Quo	32.5t
24.17 – Gabo Island	25.09	22	19	20.60												
24.18 - Gunshot	2	2	2	2.05												
24.19 – Iron Prince	8.31	11.5	11.5	4.69												
Mallacoota Large	21.85	23.5	23.5	21.5	23.5	29.4	8	4	-71	-57	7	-4	-20	-40	<u>MRAG Summary</u> Recruits up a little. Pre-recruits low although up in the last few years. Interested to hear from divers – will be interesting next year due to market fishing. VFA comment:	23.5t
23.06 – Big Rame	15.06	18	18	15.01												
24.00 – The Skerries	5.47	4	4	5.40												

24.03 – Easby Creek	1.32	1.5	1.5	1.09											<p>Good point for this year, extra effort would be good to hear from floor. 140s being targeted. Market fishing driving fishing pressure. May need firm commitments that OTs won't be exceeded.</p> <p>Leave it where it is, with understanding to not exceed OT – some divers agree.</p> <p>Diver Observation Program comments:</p> <p>No reports</p> <p>Forum comments:</p> <p>If Big Rame hits lower threshold, industry would like a Fisheries Notice (Joe Peel). Others disagreed.</p> <p>If possible would like to see an amended Fisheries Notice to close Big Rame at lower threshold due to market fishing.</p> <p>VFA explained a new Fisheries Notice would be required as determination clause under the existing notice did not allow for it. In addition, industry would need to request such a measure in writing to the CEO for consideration. (M Asplin – VFA)</p> <p>MRAG – industry have identified an area where there's an issue. It's a responsible view.</p> <p>Discussion and concern regarding Skerries exceeding the Upper Limit – undertaking from those present that this will not happen this year. It'll get 6 months break.</p> <p>ACTION: EZAIA to formerly request legal instrument to close Big Rame at the Lower Limit this current season for consideration by VFA decision makers.</p> <p>Consensus:</p> <p>Agreed. Status quo – with discussion around what might happen into the future.</p>	
Mallacoota Small	19.09	21.0	21.0	12.75	21	26.2	6	34	-3	-81	5	15	-25	-64	<p>MRAG Summary</p> <p>Not in bad shape – CPUE increasing – slight increase in pre-recruit abundance. Suggestion is a 'status quo' approach.</p> <p>VFA comment:</p> <p>Status quo supported.</p> <p>Diver Observation Program comments:</p> <p>3 comments – Little Rame, Market driven fishing, impacting CPUE. 2 reefs being heavily targeted due to market fishing.</p> <p>Forum comments:</p> <p>Leave it.</p> <p>Consensus:</p> <p>Agreed. Status quo</p>	
24.09 – Little Rame	12.51	15	15	9.75												
24.14 – Bastion Point	6.58	6	6	3.00												
Eastern Zone	321.12	345.5	337.5 (+Carryover)	202.8 5	331.5	398.1	65	22	-45	-64	59	10	-42	-27	Status quo for the zone.	337.5

NOTE: Quota carryover was allocated to areas that had not reached their Optimal Target.