

# **Response re: Draft Further Quota Order and Draft Fishery Notice 2021/22 and TACC setting process**

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As the Draft Fishery Notice and Draft Quota Order 2021/22 were prepared after considering the outcomes of the Quota setting workshop on 3 March 2021, this submission is to provide evidence of the following:

- **A deeply flawed Stock Assessment.**
- **Erroneous utilisation of the Harvest Strategy.**
- **A very poor workshop decision making process.**
- **A very poor LML setting process**

## **Flawed Stock Assessment**

The Stock Assessment relies heavily on data produced by the Fishery Independent (stock abundance) Surveys (FIS) in order to demonstrate trends in abalone pre-recruits and abalone recruits.

Over recent years however, a growing number of scientists with expertise in the field of abalone and fishery research have advised that the current surveys simply cannot provide the level of data required for the stock assessment or harvest strategy processes.

In a paper provided to Industry by Dr. Paul Mc Shane titled: Central Zone 2016/17 Summary Assessment, he concluded the following:

*..... The notion that you can estimate spawning stock biomass by extrapolating counts from fixed sites (as presented in the current assessment) is seriously flawed. Density of abalone on a typically heterogenous coastal reef is extremely patchy (particularly for blacklip abalone *Haliotis rubra*);*

*Pre recruit metrics are clearly invalid and should not be used as a recruitment forecasting measure;*

A Science Group comprising of Dr Cathy Dichmond, Dr Harry Gorfine and Dr Duncan Worthington was put together by VFA to advise the Abalone Working Group, tasked with the development of the Victorian Abalone Harvest Strategy. The Science Group produced a paper titled: Discussion Points for the Victorian Harvest Strategy Meeting May 2017: Some Options.

In the Executive Summary they wrote the following in relation to the ability of the FIS to produce indicators suitable for use in the assessment in the Harvest Strategy:

*..... There are no consistent relationships among the possible indicators investigated at the scale of SMUs, and so no clear secondary indicators that can be consistently used at the scale of SMU to contribute to the assessment in the HS. Indeed, there seems to be great variability in trends and significance of the relationships with the different indicators against recruits or CPUE by SMU. This would be required to develop some empirical harvest control rules using primary and secondary indicators across the board. No clear trigger levels are shown either i.e. some cut off point above or below which there is a clear break from previous relationships.*

In 2016 Dr Anthony Hart also carried out a review of the FIS in Victoria. His 40 page report is titled: Review of fixed sites surveys used by the Victorian Abalone Science Program.

In his executive summary he states the following:

*A number of issues were raised and investigated, resulting in 18 recommendations for changes to the FIS program. Significant enough issues exist in most elements, from the in-water sampling procedures to the sampling design and assessment outputs that maintaining the status quo is not considered viable.*

Nearly all of Dr Harts recommendations call for the redesign of one aspect or another of the FIS, which in total would result in virtually a complete re-design in order to render them fit for purpose.

Further to this, as far back as 2011, the Fisheries Research Branch published a report titled 'Victorian Abalone Assessment Project'. Under the heading 'Fishery Independent Abundance' they report the following:

**Analysis**

*Abundance estimates are effectively a measure of density, however the number of sites would need to be at least 100 fold greater to enable estimates to be scaled to abundance per reef code for instance.*

It is a fact that the current number of survey sites is significantly smaller than in 2011. They now have even less ability to extrapolate data out to the scale of reef-code or SMU.

The above by no means captures all the flaws in the current stock assessment but simply covers some of the obvious.

Quota Holders collectively are charged hundreds of thousands of dollars each year for seriously flawed Stock Assessments. This money could be far better utilised by the Central Zone engaging Dr Duncan Worthington to produce annual stock assessments along parallel lines to those that are utilised in the Western Zone of Victoria. These Stock assessments utilise all relevant available data including valuable data from the loggers.

The Central Zone under AVCZ operates one of the most comprehensive GPS data logger programs in any abalone fishery worldwide. This follows the initial development of loggers in the Central Zone of Victoria in the late 1990s, in direct response to the challenges of inadequate abundance survey data. We use three types of Data Loggers, the Boat (GPS loggers) the Diver (Depth and temperature) loggers and the shell measuring loggers.

The resistance we have encountered over the years in having the valuable logger data included in the stock assessment process is simply staggering. Over the years we have seen it virtually ignored or pushed into the fringes, as it was at the March 2021 TACC Workshop. People need to try to understand the agendas at play over the years which have marginalised the beneficial use of the logger data.

There is a current crisis in confidence towards the current Stock Assessment process amongst quota holders who pay large amounts of money annually under the cost recovery program for this service. Quota Holders are the 'client' in the cost recovery process and if the Vic. Treasury Guidelines for Cost Recovery are followed, they have the right of contestability in regard to services provided. The current Stock Assessment program should be terminated.

The Western Zone Assessment program which utilises logger technology and other available data is hailed far and wide as world's best practice, and the Central Zone under AVCZ is perfectly positioned to run a similar program. Why does such resistance to this exist?

### **Errors in utilisation of Harvest Strategy**

Toward the latter part of the Abalone Working Group sessions developing the Harvest Strategy, it was realised that the HS would not function correctly in SMUs or areas where the fishing effort had been altered or affected by recent changes in size limits or LMLs. The science group determined that threshold settings within the HS would need to be amended for those affected SMUs. This principle was accepted by the AWG and Dr Duncan Worthington then provided modified threshold settings to be used which were relevant to LML changes that had occurred prior to that time. The fact is, a number of further LMLs changes have taken place since that time which would require further input from Dr Worthington to achieve the correct functioning of the Harvest Strategy. As presented, the Harvest Strategy did not utilise modified thresholds in SMUs where LMLs had been altered. It also appeared that every paid professional in

the room at the time was quite clueless as to this omission. Should Quota Holders be paying hundreds of thousands of dollars each year for these blunders? Dr. Duncan Worthington, who was not present at the workshop, picked up the error immediately on perusal of the workshop report. The problem that could exacerbate this issue even further is that the LML changes implemented the previous year were not based on scientific data, just some opinions that LMLs in certain SMUs needed to be increased. There was no consideration given to the change in spatial distribution of effort caused by the larger LMLs including the detrimental effect of focussing effort to smaller areas of larger fish, thereby preventing the spread of effort over larger areas. How do we compensate for LML alterations not based on calculations involving the science of abalone biology or the dynamics of spatial distribution? It seems that the Central Abalone Zone is suffering considerable damage at the hands of very poor management.

The only recommendation emanating from the workshop that does appear to stand up to scrutiny based on science and data is the recommendation to reduce effort on the Back Beaches SMU. In the overall sense if the process were run properly there would probably be no need for a negative TACC result overall.

It is our recommendation that the Harvest Strategy be re-run under the oversight of Dr Worthington who could best advise how to compensate for ad-hoc LMLs.

### **Poor decision-making process at FRAG workshop**

Many Quota Holders are becoming fed up with the continued use of uncorroborated opinions being used to make final decisions which affect the fishery long into the future. This was witnessed at the recent TACC Workshop and in many past workshops. The system the Victorian Fisheries exists under is an evidence-based system as prescribed by the VFA Act. Further to this The Terms of Reference for the FRAG are also designed to create structure to its decision-making process. The following is an extract from the FRAG terms of reference:

#### *3.6 Observers and Advisors*

*Observers and Advisors can attend the meeting at the discretion of the Chairperson. Requests to attend should be sent to the chair in advance of the meeting and state the reasons for attending and any issues of particular interest.*

*Participation at the FRAG will be at the invitation of the Chairperson.*

The FRAG has never been run in the manner prescribed. Basically anyone turns up and speaks on anything they like in an unstructured manner. It doesn't help that there is no requirement for corroborating evidence to support their views. A further illustration of the unreliable nature of the anecdotal presentations at the TACC workshop became evident as a result of events following the Industry

Workshop the prior day, which was held in the hope of arriving at an Industry consensus.

Agreement across the floor was reached that there should be no need to alter the overall TACC but with some adjustments to SMU targets to better distribute effort.

At the TACC forum the next day however, a number of industry people seemed to completely forget the outcomes of the previous day and proceeded with a commentary which was quite contradictory to their earlier agreements. This highlights the unreliable nature of the anecdotal opinions and commentary at the TACC workshop.

A number of final decisions regarding Harvest Strategy outcomes were made at the TACC (FRAG) workshop utilising unsubstantiated commentary and opinions.

One of the great flaws in this process is that only part of the Industry was present at the TACC FRAG workshop. A number of industry people did not attend the TACC FRAG as they thought the bulk of the work had been done at the meeting the day before where a consensus had been reached, and there was not much more to add.

Even if the use of unsubstantiated opinions were considered appropriate, and the Harvest Strategy had been utilised correctly, should not all Quota Holders have been sent the recommendations emanating from the harvest strategy prior to the workshop and then been polled. There was no attempt to run this more balanced and equitable process.

The Industry meeting the day prior to the FRAG TACC Workshop although far from perfect did however manage to present a better rationale for the TACC outcomes. The meeting was less influenced by a flawed Stock Assessment and Harvest Strategy, and final consensus was reached. The consensus was for adjustments to some of the SMU targets in order to redistribute fishing effort, but no change to the overall TACC. Consistent with that outcome the targets for blacklip abalone we support are contained in the following table: (next page)

<b>SMU</b>	<b>PROPOSED CHANGE</b>	<b>CATCH TARGET (tonnes)</b>	<b>UPPER LIMITS (tonnes)</b>
Shipwreck Coast	No change	31.6	33.0
Cape Otway	+7t	61.9	60.1
Surf Coast	No change	2.0	5.0
Port Phillip Bay	No change (5t upper limit for exploratory fishing)	0.0	5.0
Back Beaches	-7t	40.0	42.0
Flinders	No change	25.5	28.1
Phillip Island	No change	34.0	35.7
Kilcunda	No change	12.7	16.5
Cape Liptrap	No change	11.7	12.9
Prom Westside	No change	21.0	27.3
Prom Eastside	No change	6.7	8.1
Cliffy Group	No change	5.5	6.5
<b>Blacklip Tacc Total</b>		<b>252.6</b>	

We believe there should be no change to the Greenlip TACC of 3.4 tonnes

### **Poor LML setting process**

At every FRAG meeting we witness people attempting to push LML changes through based on their opinions, with scant regard for any science. This arrogant “I know better than science” approach has been facilitated by the FRAG. Last year a number of LML changes were implemented without supporting science. The Victorian Abalone Management Plan makes it quite clear that changes to the LML are to be based on Scientific data. Under Strategy 1 it states the following (in italics):

*Size limits are an essential tool in ensuring sustainable harvesting of abalone, in conjunction with quota management. Size limits are best set at a level that conserve sufficient mature abalone to replenish where appropriate the available stock. The minimum legal size limits for abalone will be adjusted, based on scientific data, to reinforce the strategy to enhance stocks and simplify access.*

Unfortunately the Central Zone abalone fishery has been literally peppered with LML changes over the past 16 years, all on a non-scientific basis. At the time of writing this submission we hear that the FRAG is about to consider another rushed proposal for LML change in the Phillip Island SMU. In light of the fact that AVCZ is currently carrying out research throughout the Central Zone to gain up to date science on abalone size at maturity and annual growth increment, it is simply preposterous that the FRAG is entertaining another LML change proposal prior to this new data becoming available. It is also disgraceful that this is taking place within and right near the end of a two week statutory consultation period relating to a fishery notice that signalled no change to the current LML for that area.

It is undeniable that our harvest strategy, which uses CPUE as its primary indicator, requires consistency over the years to function as designed. What this fishery requires more than anything at the moment is a sustained period of stability, where we can evolve our harvest strategy and stock assessment processes into something we can all be proud of. Instead we have too many people who think they know better than any science or research, adversely affecting the stability of the Central Zone Abalone Fishery.

## **Summary of Recommendations**

**A Blacklip TACC of 252.6 tonnes**

**A Greenlip TACC of 3.4 tonnes**

**The Current Stock Assessment program to be terminated**

**Industry to engage Dr Worthington to produce a Central Zone Stock Assessment utilising the best science to determine appropriate indicators and make best use of Data from the Logger Program**

**Dr Worthington to adjust the current Harvest Strategy consistent with past LML changes and oversee its utilisation.**

**Terms of Reference for the FRAG to be strengthened to ensure an evidence/data based approach and anecdotal evidence only accepted with strong supporting data/evidence.**

**LMLs only to be altered based on proper analysis of the science of abalone biology and the spatial dynamics of abalone**

**All LMLs to remain unchanged until data is received from the current Size at Maturity and Annual Growth Increment surveys**

**All LMLs to remain unchanged until the appropriate LML benchmarks and proper LML assessment process have been put in place**

**FRAG to run process to agree on LML benchmark such as L50 +3 (or other) as determined utilising the biological science of size at maturity and annual growth increment data**

This Submission is supported by the following Victorian Central zone Quota Holders and Divers:

Peter Johnston (quota holder)  
Alan Buck (quota holder)  
Kaz Bartaska (Quota holder)  
Hans Litjens (quota holder)  
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