

Supplementary material: Caleb Gardner 11/6/26

Dear members of the committee,

On reviewing my comments after the hearing, I wish I had explained some issues better. I hope you can consider my clarifying comments below:

On whether the stock is unsustainable:

The key point is that “unsustainable” and “depleted” are two different things.

“Depleted” means the abundance of large adult fish is unacceptably low.

“Unsustainable” means that the numbers of juveniles has been reduced by fishing. We avoid depleted fisheries because they can become unsustainable.

The IMAS stock assessments showed the sand flathead stock was depleted in 2021, which is why catch was reduced in 2023 to enable stock recovery. These catch reductions were based on IMAS science with recommendations implemented in full.

The status was “depleted” (not “unsustainable”) in the 2026 assessment because there is no evidence of either (i) decline in fishing mortality (because there was no data collected on effort) or (ii) improvement in spawning biomass (because the length survey was completed only 18 months after the changes and it will take a while to rebuild from such low levels).

The status will remain “depleted” for at least the 2027 and 2028 assessments for the same reasons, even with ~zero fishing catch.

There is no mention of the stock being unsustainable in the IMAS stock assessment report. NRE has made public statements that the stock is “highly unsustainable” which is not supported the IMAS stock assessment. I think this is a serious problem because management should be based on science. Misinformation on the stock status has confused people and created needless anxiety.

None of this disputes the fact that the stock is depleted and stock rebuilding should occur. This was the rationale for the 2023 cuts in catch, which I enthusiastically support. Stock rebuilding needs to occur because (i) the quality of recreational fishing is poor, and (ii) spawning biomass is low which increases risk of future recruitment problems.

In Australia we have a national definition of sustainability through the National Status of Australian Fish Stocks (SAFS) process, which Tasmania participates in. A sustainable fish stock is one that is not recruitment overfished – which means that the fishery is not harming the supply of juveniles.

The Tasmanian sand flathead fishery cannot be called “highly unsustainable” because recruitment remains healthy. This is not my opinion – it’s just applying the SAFS framework and the results of the IMAS flathead assessment. There are lots of juveniles coming through the fishery so the stock will be fine if we just stop fishing it at the levels that depleted the stock pre-2023. None of this is news – it’s why the government responsibly cut catch in 2023.

I noticed some other people before the committee tried to defend levels of estimated spawning biomass being below the standard limit reference point of 20%. I strongly disagree with this because it’s inconsistent with the Australian national guidelines for harvest strategies. Spawning biomass <20% is risky, and biomass should be rebuilt. The 20% limit reference point is well justified in fisheries science and is used for a reason. This is why the government reduced catch in 2023. The catch settings recommended by scientists (now scrapped by NRE) were expected to lead to this recovery.

On lack of compliance and whether this could be preventing stock rebuilding despite the management changes made in 2023:

The 2023 management changes were based on modelling that had a range of assumptions. If these assumptions were wrong, then perhaps the changes made in 2023 were inadequate? This is a reasonable question to ask, however we need some data and analysis on this issue before scrapping a science-based approach to management.

We are currently faced with two topics of debate and speculation, and we don’t know enough about either to make informed decisions.

We don’t know if effort has reduced substantially in response to the 2023 changes. It seems common sense that the 2-fish bag limit would have an effect, and the committee heard anecdotal information that the effort has reduced. If IMAS and NRE accepted this anecdote, then the stock status would shift from “depleted” to “recovering” – but they don’t include this in the assessment because it’s anecdote and the scale/implications have not been measured. I think that’s reasonable.

Likewise, we also have anecdotal reports from police that compliance is a problem. Apparently, they had data for the committee, yet they’ve made nothing public and have given nothing to IMAS with the stock assessment report silent on compliance. I was told at the enquiry that the police say ~ 25% of inspections reveal a compliance problem. This still tells us almost nothing about the risk to stock rebuilding because we don’t know if this is better or worse than pre-2023, the type of problem, or the effect on

spawning biomass. For example, non-compliance in taking undersize males has no effect on recovery of female spawning biomass.

There are two sensible responses to anecdotal information on poor compliance in the fishery (neither is to shut the fishery).

The first for the police to give anonymous, aggregated data to IMAS so that the risk to stock rebuilding can be assessed scientifically instead of all this current speculation. Is the reported non-compliance a problem? Is it harming stock recovery? We have no idea.

The other obvious response to any non-compliance issue is to fix it. Closing the fishery because the police are unable or unwilling to inspect boats and issue fines is crazy.

What happens when the fishery reopens at some point in the future and we have poor compliance? Is the government strategy for flathead to allow endless cycles of poor-compliance, stock depletion and fishery closures? Should we close all fisheries in Tasmania because there are unknown effects of poor-compliance on stock status?

On getting better growth information from closed areas:

I explained that we are uncertain about growth because of the lack of larger/older fish and it would be helpful to close an area to allow access to these in the future. I should have made two points better.

First, I suggested Fredrick Henry Bay as a candidate site. I wanted to say this is because it's fairly contained and also because levels of heavy metals are high so there's possibly a public health benefit in reducing consumption. The Derwent Estuary (say northwards of Tranmere) is another possible candidate for the same reason.

Secondly, one of the committee asked if we won't have access to large / old fish anyway with the current closure. This may be correct but my guess was that the fishery would reopen once the stock recovered above a limit reference point (e.g. 20% spawning biomass), not when the stock was closer to a target reference point (e.g. 60% biomass) or natural (100% biomass) levels. We'd need a longer closure to get older fish and nobody knows what's planned for the current closure.

If nothing else, this discussion highlights that we're all guessing on the rebuilding plan including duration, performance indicators and reference points for reopening. This is a recipe for more conflict in the future. It's an example of why we need a harvest strategy..

On harvest strategies:

I am passionate about harvest strategies because I've seen spectacular results in their protection of stocks and ecosystems. In contrast, I've seen failure in many popular policy approaches where there were high expectations (e.g. rights-based management, marine parks, marketing incentives, nudges, co-management,..).

Tasmania lags the country in applying harvest strategies despite having most of the national experts living here (e.g. three of the four people who developed the commonwealth strategy). A harvest strategy for flathead would have prevented the need for this enquiry and would prevent future conflict. Harvest strategies are easy to do, and we can catch up with other states in 6 months if there's willingness.

I believe we only have an enquiry today because everyone had different expectations about the future after the 2023 management changes, especially about the time required to see improvement in the stock status report. This ambiguity created confusion and chaos.

The government has said they want to close the fishery because the 2026 assessment report has not shown an improvement. I feel that's a mistake because I understand the assessment method and know that it was impossible to see an improvement in the 2026 report. I'm not concerned about who is right or wrong, but I am concerned that the process is subjective and outcomes will flip-flop around depending on who is in control. This is a recipe for ongoing conflict and it's why the Tasmanian parliament needs to keep wasting time on these enquiries (I've attended enquiries on the identical issue of low stocks/recovery in lobster and abalone).

A harvest strategy would define:

- what we are going to measure (e.g. spawning biomass, survey of fishers satisfaction, catch rate,..),
- the reference points (e.g. a short-term objective of 20% spawning biomass so the fishery is not depleted, and a long-term objective of 60% biomass so recreational enjoyment is maximised)
- and the rebuilding pathway to get us from where we are now to where we want to be, with milestones along that pathway.

If we had defined a rebuilding plan in 2023 then this enquiry would be unnecessary. It would have defined milestones for when we wanted to see improvement after the 2023 changes, and by how much. Planning ahead would have avoided a knee-jerk reaction to the 2026 stock assessment. There'd be no surprises for recreational fishers. If we'd planned ahead, then we'd realise the 2026 assessment could never indicate success or failure of the changes in 2023.

At the start of my presentation I mentioned the need for aspirational objectives in fisheries. I was trying to encourage the committee to think further than just recovery

above the 20% limit reference point. For example, if the committee thinks we should prioritise supply of food, then scientists would use a target biomass of ~ 40%. If the committee thought enjoyment was more important then we'd target 60% (common with recreational fisheries). If cultural fishing was a priority, then we'd go higher, perhaps 70%. Scientists can't recommend management settings unless we know the objective. All these choices involve trade-offs, and the fishery can't be optimal for one objective without making it worse for other options. This is a tough, high-level decision that should be made by politicians.

So I wanted to encourage the committee to (i) recommend rapid development of a harvest strategy for flathead to avoid future surprises / conflict, and (ii) suggest an aspirational objective for the fishery that would help future planning.

Thank you for the opportunity and apologies for sending such a long document.

Prof Caleb Gardner