



Response to Rock Lobster Fishery – Total Allowable Catch 2022/23 (November 2021)

INTRODUCTION

TARFish welcomes the opportunity to provide advice on the Total Allowable Catch for Rock Lobster 2022/23 in response to the letter from the Director of Fisheries dated 11 November 2021.

It is TARFish's view that the Department's proposed inaction on TAC will have a detrimental effect on the rock lobster fishery and that the impact of that inaction is likely to be borne disproportionately by recreational fishers in the short to medium term.

By not applying the proposed commercial east coast catch cap reduction to the statewide TACC, the commercial catch is not sufficiently constrained.

It is TARFish's strong view that the proposed reduction in the East Coast Catch Cap be applied to the statewide TACC giving the effect of reducing the TACC from 1050.7t to 1029.7t.

TARFish considers that this is the minimum reduction that should be applied to the TACC.

Further, given the IMAS advice that the East Coast Catch Cap should be reduced to 72t for the commercial sector, it is our view that this advice should be adopted.

This would then be applied to the TACC giving the effect of reducing the TACC from 1050.7t to 1018.7t.

In just three years, we have seen the statewide virgin biomass target (Target Reference Point (TRP)) blow out by three years from 2023 to 2026 and the probability of achieving it reduced by almost 30%.

TARFish is of the strong view that management decisions must support the TRP being met within the timeframe at the required probability level. This is the same view we expressed last year when the probability of meeting the target was higher (67%) with this year's data showing a further erosion of the probability (64-66%) of reaching what is already a low TRP.

In just 12 months, we have seen a further erosion in the probability in reaching the TRP and an increase in the amount of TACC reduction that would be needed to correct it. The trajectory for both is clear and the Department's view of maintaining a "watching brief" is simply deferring what will likely be a much larger cut to TACC in another year.

TARFish therefore questions the Government's commitment to achieving its own targets and does not support maintenance of the TACC at the current level. It is TARFish's view that to abandon the TRP through failure to take corrective action via the TACC leaves the Department and the Minister vulnerable to criticism for effectively abandoning the management strategy and East Coast Stock Rebuilding plan.

In summary, it is TARFish's view that the Department's TACC proposal;

1. takes no action to achieve the (already delayed) biomass target
2. relies on highly uncertain assumptions and therefore the probability of achieving the TRP is likely lower than presented
3. fails to apply the proposed east coast catch cap reduction on the statewide TACC at a time when 5 of the 8 assessment areas are below the limit reference point for virgin biomass
4. should further reduce the commercial east coast catch cap from the proposed 83t to 72t as recommended by IMAS
5. will result in an over-weighting of the burden of returning the east coast to a sustainable level on recreational fishers through size limit changes that the Department intends to apply from 2022.

DEPARTMENTAL PROPOSAL

The letter provided states, *"the Department proposes that there be no change to the statewide total allowable commercial catch (TACC) for 2022/23,"* on the basis that *"the required adjustment to the TACC remains very small, the Department believes it is a low risk strategy to maintaining a "watching brief" on commercial landings this season."*

Importantly, the letter goes on to state, *"Under the statewide resource sharing arrangement in the rock lobster fishery management plan, the total allowable recreational catch (TARC) has a minimum 170t level. The proposed TACC of 1050.7 t will have no consequential effect on the total recreational allowable catch (TARC). The TAC for 2022/23 will be the TARC (170t) plus the TACC determined by the Minister."*

In addition to this formal consultation on TAC, the Government has indicated the following has been included in their assumptions for stock recovery:

1. The proposed new size limit strategy will be progressed and implemented in November 2022 (as outlined at RecFAC meeting #74)
2. The Tasmanian Rock Lobster Fisherman's Association (TRLFA) commercial translocation program will continue

For completeness, TARFish also notes that:

1. The Government has committed not to adjust the daily bag limit or recreational season for the East Coast Stock Rebuilding Zone (ECSRZ) for 2022/23
2. The Department is proposing reduction in the commercial catch cap for the ECSRZ of 20% from 104t to 83t for 2022/23
3. The Department is proposing to maintain the North East Coast Catch Cap in Area 4.
4. Rock lobster management planning including east coast management options for 2023 onwards are being developed for consideration by the Department for consideration by the Minister. Stakeholder consultation is being anticipated late 2021/early 2022 as part of the consultation package that will include the new size limit strategy, commercial pot limits and other management proposals/rule changes.

TARFish provides the response below to the Departmental position.

1. PROPOSAL TAKES NO ACTION TO REACH (AN ALREADY DELAYED) TARGET

TARFish strongly supports returning the rock lobster fishery to a sustainable level.

The Government has identified the Limit Reference Points (LRP's) for Egg Production and Virgin Biomass are a "bottom line". The Institute of Marine and Antarctic Studies (IMAS) 2020/21 Preliminary Rock Lobster Assessment Summary (IMAS Assessment) states, *"This reference point has been set at a level below which subsequent recruitment may be impacted, hence is a critical limit reference point for ensuring sustainability."*

Current statewide egg production and virgin biomass against the LRP's is shown below.

Statewide Reference Point	Limit Level (2020/21)	Actual Level (2020/21)
Egg Production Limit	30%	37.7%
Virgin Biomass Limit	20%	23.3%

The aggregated statewide achievement of the Limit Reference Points (i.e. Egg Production and Biomass for 2021) are not significantly above what is deemed a "critical level" by IMAS for ensuring sustainability. Whilst we do not want to be overly critical of the achievement of these LRP's, however when viewed in

the context of the eight Stock Assessment Areas (assessment areas) the sustainability of the rock lobster fishery remains of serious concern. Notably:

- 5 of the 8 assessment areas were below the limit reference point for virgin biomass
- Area 2, of extreme importance to recreational fishers, sits at just 10% virgin biomass and has declined every year for the past 5 years.
- Areas 2, 3, and 4 have egg production that is just above the limit reference point
- Area 5 egg production remains below the limit reference point.

In addition to the LRP's, there is also an interim biomass target reference point (TRP) of the unfished biomass (virgin biomass). The TRP is 25% virgin biomass to be achieved by 2026 at a required probability level of 70%. TARFish notes that the original target date for achievement of the TRP was 2023.

The IMAS Assessment states, "This TRP is an extremely low level for a target relative to those used in most fisheries..."

The IMAS modelling indicates the TRP would not be met and that to achieve the required 70% probability of reaching the interim biomass target, a 1-2% or 1-2kg/unit reduction would be needed. The current estimated probability is 64-66%.

TARFish notes that the goal posts for this extremely low TRP have been shifted once already and provides a comparison of the statewide reference points from 2017/18 and 2020/21

Figure 1 Statewide reference point 2017-18 (source: IMAS Fishery Assessment Report (Tasmanian Rock Lobster Fishery) 2017/18)

State-wide Reference Point	Level	Year	Probability	
			Required	Achieved
Egg Production Limit	30%	2021	90	100
Virgin Biomass Limit	20%	2021	90	99
Virgin Biomass Target	25%	2023	70	93

Figure 2 Statewide reference point 2020-21 (source: IMAS 2020/21 Preliminary Rock Lobster Assessment Summary)

Statewide Reference point	Level	Year	Probability	
			Required	Achieved
Egg Production Limit	30%	2021	90	100
Virgin Biomass Limit	20%	2021	90	100
Virgin Biomass Target	25%	2026	70	64-66

In just three years, we have seen the virgin biomass target blow out by three years from 2023 to 2026 and the probability of achieving it reduced by almost 30%.

TARFish is of the strong view that management decisions must support the TRP being met within the timeframe at the required probability level.

This is the same view we expressed last year when the probability of meeting the target was higher (67%) with this year's data showing a further erosion of the probability of reaching what is already a low TRP.

It is important to consider the Department's view that the TACC should be maintained at the current level in light of advice received from The Minister's Crustacean Fishery Advisory Committee (CFAC) and Recreational Fishing Advisory Committee last year when it considered its views on the TAC for the current year.

Advice on TAC setting for 2021/22:

1. Crustacean Fishery Advisory Committee (CFAC) Meeting #85 (October 2020)

"With the exception of the Community and Conservation member, the FAC supported the DPIPWE proposal noting that there would be a need to consider a TAC reduction 12 months' time if stock rebuilding was not back on track." (TARFish emphasis)

Formal recommendation to Minister: CFAC recommends that the Rock Lobster TACC for 2021/22 remain unchanged and be set at 1050.7 tonnes, which equates to 100kg/unit, noting that biomass target reference point is not being met.

2. Recreational Fishing Advisory Committee (RecFAC) Meeting #73 (November 2020)

"After considering the potential impacts of a TACC reduction, impact of COVID 19/China market influences on a potential under catch (commercial) and fishery risks RecFAC recommended the TACC be reduced by 1% (~ 10 tonne) for 2021/22."

Formal recommendation to Minister: RecFAC recommended that the TACC for 2021/22 be reduced by 1% ie 10 tonne to 1040 tonne.

As can be seen from the extracts above, CFAC acknowledged that a TAC reduction should be considered as the current stock assessment is not "back on-track".

Repeating a point raised in our submission last year: the report titled *In pursuit of maximum economic yield in an ITQ managed lobster fisher* (Gardner et al, 2015) states "A gradual change in TACC of even 1% per annum also improved biological performance measures. Catch rate (and thus revenue per potlift) improved as stock rebuilding occurred with lower TACCs. Egg production is used as a measure of biological sustainability in this fishery and the projected median trend was downward under the status quo TACC, but this trend was reversed by annual 1% TACC reductions."

When viewed in this context, a 1-2% reduction is meaningful and certain in reaching the TRP at the required probability level of 70%.

In addition to TARFish's recommendation last year to reduce the TACC, The Minister's Recreational Fishing Advisory Committee (RecFAC) supported a 1% reduction last year which was not adopted by the Minister. In just 12 months, we have seen a further erosion in the probability in reaching the TRP and an increase in the amount of TACC reduction that would be needed to correct it. The trajectory for both is clear and the Department's view of maintaining a "watching brief" is simply deferring what will likely be a much larger cut to TACC in another year.

TARFish therefore question's the Government's commitment to achieving its own targets and does not support maintenance of the TACC at the current level. The effect of this inaction on TACC on recreational fishers is discussed later in this submission.

2. PROPOSAL RELIES ON HIGHLY UNCERTAIN ASSUMPTIONS TO REACH TARGET

The Department is relying on a number of highly uncertain assumptions to reach the interim target reference point (TRP) without taking action now on TACC. It is TARFish's view that there is insufficient confidence in each of the assumptions identified below to include them in the model calculations for probability of reaching the TRP and they may be supporting greater uncertainty than is accounted for and the probability is likely lower than is currently modelled. The specific uncertain assumptions are set out below.

Assumption 1: Interim target may be met by potential under-catch

TARFish does not support the Departmental view expressed in the letter that reaching the required 70% probability of the interim target may be met by a potential under-catch this year.

This is the same argument relied upon last year.

In reality, there was no commercial undercatch last year (2020-21) when considered in the context of the “carry-over” from 2019-20. The table below shows the TAC for both sectors against actual catch. The total commercial catch was 1072.1 which is 22.1 tonnes above the TACC of 1050.7.

Table 1 Total Allowable Catch and Actual Catch for both Recreational and Commercial Sectors 2020-21

	Total Allowable Catch		Actual Catch	
	T	%	T	%
Commercial	1050.7		990.6	
Commercial carryover from 2019-20			81.6*	
Total Commercial	1050.7	86%	1072.1	93%
Total Recreational	170.0	14%	81.6	7%
Total All Sectors	1220.7		1153.7	

**Actual caught of a total allowable carryover of 86.3t*

To effectively allow “the market” to determine management response to a significantly compromised fishery appears to abrogate the responsibility of the Government to the commercial sector and prevailing market forces.

This approach is highly uncertain and we cannot be positively assured that the interim target will be met and therefore should not be relied on when setting the TAC.

Assumption 2: Reaching interim target will be supported by TRLFA translocation program

Modelling used to estimate probability of reaching the TRP of 25% assumes an ongoing rock lobster translocation of the order of 100,000 animals each year.

It is TARFish’s view that it is overly optimistic to include a translocation in the order of 100,000 on the basis that the industry program concluded this year (2021). It is our understanding that the Tasmanian Rock Lobster Fisherman’s Association (TRLFA) is required to make a decision (via membership vote) whether or not to continue the commercial translocation program which will not occur before IMAS provides advice and evaluation regarding the impacts of the translocation program due in 2022. This advice is being sought following increasing concerns from commercial fishers that productivity in other assessment areas is being impacted by the program.

It is understood by TARFish that the commercial translocation program has provided a 5% increase to productivity on the east coast. If the Departments other proposal to reduce the east coast commercial catch cap next year by 20% is implemented, and the Government’s commitment to “Accelerate development of a new East Coast Stock Rebuilding Zone Strategy for Rock Lobster...with the goal of increased take arrangements for recreational fishers” is delivered on, commercial effort on the east coast may be further reduced. It is therefore reasonable to assume that of equal probability of the program continuing, is that the TRLFA may reduce or cease the program as there would be limited benefit to the commercial sector from its continuance. It is TARFish’s view that to include it as an assumption in the modelling may maintain or even inflate the probability of achieving the TRP without any certainty of the programs continuance. Further, that without a commitment from the TRLFA to continue the program for another three years prior to the TAC being decided for 2022/23 by the Minister that it should be removed from the modelled TRP.

Assumption 3: Total East Coast Catch constrained to the required level

This is an unreasonable assumption given:

- a. IMAS identified that the “required level” to reach the TRP was a total east coast cap of 120t (source: RecFAC minutes #73)
- b. IMAS identified that the “the east coast catch cap for the commercial sector will need to be reduced from 104t to 72t (source: RecFAC #73)
- c. the Government’s commitment not to adjust the daily bag limit or recreational season for the East Coast Stock Rebuilding Zone (ECSRZ) for 2022/23; and
- d. the proposed 20% reduction in the commercial catch cap to 83t (from 104t) for 2022/23

The East Coast cap and actual catch for 2020/21 is shown in the table below.

ECSRZ 2020-21	Total Allowable Catch/Target		Actual Catch*		Overcatch	
	T	%	T	%	T	%
Commercial	104.0	75%	109.3	68%	5.3	5%
Recreational	35.0	25%	51.1	32%	16.1	46%
Total	139.0		160.4			

Looking at the actual east coast catch from last year and using that as a predictor of potential recreational catch for 2022/23 it should be assumed that at least the same amount will be caught.

$$51t \text{ (recreational)} + 83t \text{ (commercial)} = 134t$$

This is in line with this years cap and is 14t over the “required level” of 120t identified by IMAS as the “required level” to reach the TRP. Given the further erosion in probability since last year, it is likely that the “required level” level is now even lower.

It is important to note that the Tasmanian Rock Lobster Fishery East Coast Stock Rebuilding Strategy has the target of reaching 20% virgin biomass by 2023. The East coast is made up of assessment areas 1, 2 and 3. Their current virgin biomass levels are 21%, 10% and 16% respectively.

Assumption 4: The new size limit strategy will be implemented from November 2022

In March 2021, a size limit proposal was presented at RecFAC #74. The accompanying documentation states *“There is an opportunity to progress changes to size limits as part of the management plan remake legislative project. The timing of this project would provide a potential implementation date for the commercial sector 1 March 2022 and for the recreational sector 1 November 2022.”*

As can be seen from the excerpt above, the size limit changes are not confirmed referring to an “opportunity” and “potential implementation.” Notably, the potential implementation is unlikely to occur for the commercial sector for the proposed March 2022 date.

Given the inability to progress this proposal in the timeframe foreshadowed in March this year, it is not certain that they may be implemented for 2023 noting that in just 6 months, the target implementation has slipped by 12 months for the commercial sector.

The delayed impact of the proposed size limit changes on recreational fishers is discussed later in this document. The purpose of including here is to note that it is an assumption that is not certain and therefore should not be included in the modelling.

3. REDUCED EAST COAST CATCH NOT REMOVED FROM TAC

The Government proposes to maintain the current statewide TAC whilst reducing the commercial east coast catch cap. This will increase pressure on other assessment areas noting that Areas 5 and 7 remain below the limit reference point (LRP) for virgin biomass. This represents 2 of the 4 areas that effort will be displaced to given the proposed continuance of the cap for the North East Coast (Area 4) and the proposed reduction in the East Coast Catch Cap (Areas 1-3).

It is TARFish's strong view that the proposed reduction in the East Coast Catch Cap be applied to the statewide TACC giving the effect of reducing the TACC from 1050.7t to 1029.7t.

TARFish considers that this is the minimum reduction that should be applied to the TACC. This is also in line with the necessary 2% TACC reduction (to 1030.1t) needed to reach the TRP with the required probability.

Further, given the IMAS advice that the East Coast Catch Cap should be reduced to 72t for the commercial sector, it is our view that this advice should be adopted.

This would then be applied to the TACC giving the effect of reducing the TACC from 1050.7t to 1018.7t.

4. SIZE LIMIT CHANGES WILL UNFAIRLY IMPACT RECREATIONAL FISHERS

The proposed size limit changes were provided in March 2021 at RecFAC #73.

TARFish accepts that the productivity of rock lobster will improve as a result of size limit changes.

The size limit changes proposed for Areas 2 and 3 include an increase in minimum size for both sexes to 115mm and a maximum size of 140/145mm.

Notably, more than a third of all recreationally caught rock lobster comes from this area. IMAS noted that the effect of this size limit change will reduce CPUE by 50% for two years before fish grow on sufficiently to return to more normalised catch rates.

This has will have a disproportionately dramatic effect on recreational fishers, particularly as these limits will not have applied to the commercial sector in 2022. It is unfairly weighted to recreational fishers because they cannot easily relocate effort unlike the commercial sector. As CPUE will decline so substantially (expected to be by 50% for the first 2-3 years), the "move on" trigger will take effect for the commercial sector who will relocate their effort to other areas where CPUE is not significantly affected.

Without a reduction of the East Coast Catch Cap to the IMAS recommended 72t to maintain sufficient probability of achieving the biomass target, noting that Area 2 is at just 10% virgin biomass and has declined for the last five years, it then falls to recreational fishers to bear the greater burden of returning the fishery to a minimum sustainable level.

This is an unacceptable approach.

It is TARFish's view that the East Coast Catch Cap for the commercial sector should be reduced to 72t for the 2022/23 season to ensure there is some protection for the stock and that, if and when the size limit strategy is applied, that recreational fishers are not unfairly tasked with rebuilding the stock levels from 2023 onward.