

## 2021/22 TACC RECOMMENDATION

The Rock Lobster and Giant Crab Resource Assessment Group (RLRAG) met on 23 February and 2 March 2021 to review the 2019/20 rock lobster and giant crab stock assessment reports. Based on the results of these assessments and their application to the Harvest Strategy, the RAG provides VFA with the following recommendations on setting the 2021/22 Total Allowable Commercial Catch (TACC).

### ROCK LOBSTER – EASTERN ZONE

#### Assessment summary

The 2020/21 TACC was again set at 40t, following the previous reduction from 47t and the substantial reduction from the 59t TACC of the previous four seasons. The TACC was set based on the outcomes of the stock assessment applied to the new harvest strategy in 2019/20 during which time catch rates had appeared to stabilise.

The 2018/19 standardised CPUE increased to 0.41kg/potlift, supporting the rationale used for the previous 2019/20 TACC setting process, however it has reduced back to 0.37 kg/potlift in 2019/20.

Egg production has fallen from a recent high of 27.2% in 2013/14 to 24.0% in 2019/20 – however remains above the 20% limit reference point.

The model estimated biomass has decreased by 44% from the recent 2013/14 high. Compared to the previous season, biomass in 2019/20 decreased a further 3%.

#### Application of the Harvest strategy

Decision Rule	2019/20 Stock Indicator Level	Outcome
<b>1. <u>Egg Production</u></b> <b>Is the model estimated egg production above the limit reference point of 20% of unfished levels?</b>	The 2019/20 egg production level is estimated at 24% of unfished levels.	Decision rule has been met. Go to Rule 2
<b>2. <u>TACC Determination</u></b> <b>a. What is the standardised CPUE relative to the preceding season</b>	Standardised CPUE is 0.374kg/pot-lift in 2019/20	Standardised CPUE has <b>decreased</b> from 0.41 in 2018/19 to 0.374 in 2019/20.
<b>b. Is the 2019/20 PRI at or above the reference point of 0.32 undersize/pot-lift?</b>	The PRI is 0.20 undersize/pot lift	The PRI has increased from 0.08 in 2018/19 to 0.20 in 2019/20 however remains below the reference point.  Decision rule not met. No further decision rules considered
<b>RESULT</b>		<b>Set 2020/21 TACC at CPUE range 0.35 - &lt;0.375</b>

## **Recommendation:**

The RLrag noted the very small amount by which the 2019/20 CPUE fell below the lower band of the CPUE/TACC look-up table. They recognised the significant implications that the COVID-19 pandemic (and Chinese trade sanctions) had on export markets for rock lobster, and that this may have impacted CPUE through changed fishing behaviour and fisher efficiency. Regardless of this, however, the RLrag expressed serious concern around the continued long-term declining trends across biomass and egg production.

The RLrag recognise that the reduction by the Harvest Strategy is fully warranted in trying to avoid this stock reaching the egg production limit reference point. The fishery is at the lowest level of biomass observed and based on the stock assessment indicators and harvest strategy the RLrag support a reduction in the TACC.

The RLrag fully recognises that the human and social outcomes of a further TACC reduction will be felt by fishers and their families within the industry.

In addition, based on their concern about declining status of the Eastern Stock, the RLrag unanimously supported that the reduction in catches should be made across both the recreational and commercial sectors.

**In considering the 2019/20 stock assessment report and application of the Harvest Strategy, the RLrag recommends the 2021/22 TACC be reduced to 32t.**

## ROCK LOBSTER – WESTERN ZONE

### Assessment summary

Under application of the new Harvest Strategy, the TACC for the Western Zone in 2018/19 was set at 245t, an increase from 230t. The TACC subsequently increased to 246t in the 2019/20 season due to a minor update of the Harvest Strategy and remained at this level for 2020/21.

Overall, the stock indicators in the Western Zone show a marginal improvement. The standardised catch per unit effort (CPUE) improved from 0.64kg/pot-lift in 2018/19 to 0.67kg/pot-lift in 2019/20.

Egg production has been relatively consistent at 23-24% in the last seven years, in 2019/20 egg production was at 23.0% which is above the 20% limit reference point. Biomass has been increasing slowly from a recent low in 2008/09 to a level 85% higher than this in 2019/20.

The numbers of undersize lobsters have continued to increase from the recent historical low, but are still at very low levels. The pre-recruit index has been below the reference point of 1.81 in the previous six seasons. In 2019/20 the fixed site component of the PRI was above the reference point with a value of 1.99. Due to COVID impacts on observer coverage, the observer component of the PRI index was incomplete and a meaningful combined index could not be calculated. There was uncertainty regarding other indicators of pre-recruits, and the RAG was reluctant to assume the fixed-site component of the PRI was robust indicator on its own.

### Application of the Harvest strategy

Decision Rule	2019/20 Stock Indicator Level	Outcome
<b>1. <u>Egg Production</u></b> <b>Is the model estimated egg production above the limit reference point of 20% of unfished levels?</b>	The 2019/20 egg production level is estimated at 23% of unfished levels.	Decision rule has been met. Go to Rule 2
<b>2. <u>TACC Determination</u></b> <b>a. What is the standardised CPUE relative to the preceding season</b>	Standardised CPUE is 0.67kg/pot-lift in 2019/20	Standardised CPUE has increased from 0.64 in 2018/19 to 0.67 in 2019/20
<b>b. Is the 2019/20 PRI at or above the reference point of 1.81 undersize/pot-lift?</b>	Fixed site PRI was above the reference point for the first time in seven years. Observer based PRI was unavailable due to COVID-19. The combined PRI value is incomplete.	The decision rule could not be fully evaluated.
<b>RESULT</b>		<b>No increase to TACC</b>

### Recommendation:

The RL RAG acknowledged that whilst there is continued but slight increase in the PRI, the observer data for the assessment period is incomplete and the fixed site indicator alone is not sufficient to put the PRI value above the threshold.

The RL RAG recommends that in accordance with the Harvest Strategy, due to the incomplete PRI not meeting the threshold and satisfying eligibility for a TACC increase, the 2021/22 TACC should remain at 246t.

## GIANT CRAB

### Assessment summary

The TACC for giant crab has been 10.5 tonnes since 2014/15. Catch history shows current catches around the 10t level. This level has been sustained over the past eight years, even though the current biomass is likely to be much smaller in comparison to the early 1990s.

Overall, the targeted catch rate in 2019/20 was between 0.95 and 1.14kg/24-hour pot-lift. This is a substantial reduction from the 2017/18 value of 1.27kg/24-hour pot-lift but remains well above the limit reference point of 0.52kg/24-hour pot-lift for the fishery.

In August 2019, the size limit for male crabs was reduced to 140mm. Of the 3090 crabs landed during 2019/20, 475 were between 140 and 150mm. This roughly corresponds to 15% of the weight of the landed catch. These crabs would not have constituted legal catch under the old system and consequently resulted in an increased CPUE compared to previous years. This bias was attempted to be corrected using two methods: 1) correcting the 2019/20 CPUE by removing 15% of the catch weight; and 2) considering the catch rate of crabs in numbers per potlift. The CPUE range provided in the stock assessment consists of these two methods.

The Harvest strategy currently does not outline provisions for increasing the TACC. Whilst CPUE is well above the limit reference point, the limited data available to assess the stock requires a precautionary approach to be undertaken in setting the TACC.

### Recommendation:

**The CPUE remains well above the current limit reference point and based on application of the current harvest strategy the RLRA recommends that the 2021/22 TACC remains at 10.5 tonnes.**