

Victorian Recreational Rock Lobster Tagging Program Summary Report

Season 3: November 2019 – September 2020



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Executive Summary

The number of registered fishers in the rock lobster recreational tagging program has remained relatively stable over the past three years with ~5500 people registering an interest to fish each season. The total reported catch in Season 1 was 3856 lobsters in the Eastern Zone and 4069 lobsters in the Western Zone. In Season 2 this declined to 3101 in the Eastern Zone and 3733 in the Western Zone. Season 3 had a lower-than-expected catch in both the Eastern (1840) and Western (2555) Zones, which may be influenced by events such as bushfires and the covid-19 pandemic. Consequently, when converted to weight, Season 3 catches were substantially lower than previous seasons with 3864 kg in the Eastern Zone and 4343 kg in the Western Zone, a reduction from 6202kg in the Eastern Zone and 6346kg in the Western Zone (under 3% of the TACC) whilst in the Eastern Zone it has averaged 12.3% over the past three seasons. The high Eastern Zone percentage is influenced by the TACC reduction in Season 2 (from 59t to 47t). This occurred again in Season 3 as the TACC was further reduced to 40t.

Registered fishers are predominately centred around the coastal urban centres of Warrnambool, Queenscliff and Gelong and the majority of tags used in all three seasons occur around these regional areas. While over 90% of the recreational catch was fished between November and April in the Eastern and Western Zones in both Season 1 and Season 2, this was reduced to under 78% in Season 3. Data obtained in the recreational tagging program in Seasons 1, 2 and 3 show a higher number of large lobsters in the Eastern Zone, while the Western Zone has a higher number of smaller lobsters, which supports anecdotal evidence from fishers. The number of participants reporting tags on the day of capture, which can improve data accuracy, has decreased 18% over the past three seasons to 43% in 2019/20. The number of participants in the citizen science program has also decreased in Season 3 compared with Seasons 1 and 2.

Introduction

The Victorian Rock Lobster Fishery is based primarily on the Southern Rock Lobster, *Jasus edwardsii*, which is a high value and iconic species both in Australia and overseas. The fishery spans the length of the Victorian coast and supports both commercial and recreational rock lobster fisheries. It is the most valuable commercial fishery in Victoria, making it an important contributor to the State's economy.

Fishing for rock lobster is an important activity for many Victorians who most commonly collect them by snorkelling, diving or using hookah, or with the use of hoop nets. Unless exempt, a fisher must hold a Victorian Recreational Fishing Licence to take rock lobsters. The recreational catch is managed using daily bag limits, possession limits, minimum size limits and closed seasons. The recreational closed season and restrictions correspond with the commercial fishery. The number of rock lobster caught annually by the recreational sector has previously been a significant data gap.

On 1 July 2017, the VFA implemented a three-year pilot program requiring all recreational fishers to tag the lobsters they catch and keep and report the use of tags. The objective of the program is to obtain an estimate of the annual recreational catch by using the number of tags used in that season to represent the number of rock lobsters removed from the stock. The program provides the ability to ascertain whether the actual catch is in line with the assumed notional catch share that informs annual stock assessments. Underpinning the program is the requirement for recreational fishers to create an online account through which they order tags and report tags used through either a smartphone app or web portal. The tags are registered to individuals and the numbers used represent the number of rock lobsters caught in that year.

The initial 3-year trial has been highly successful to date with the information collected under the program enhancing the capacity to make robust fishery management decisions. On the back of the success of the trial, in early 2020, the Minister committed to transitioning the trial to an ongoing program.

This summary report provides an overview of data collected through Season 1 (2017/18), Season 2 (2018/19) and Season 3 (2019/20) of the program, and comparisons between the three seasons.

Considerations in Analysing 2020 Data

As part of FRDC project 2019/075: Recreational Southern Rock Lobster tagging program – assessing current data and modelling assumptions and approaches to establish a robust estimate, researchers from the Institute for Marine and Antarctic Studies (IMAS) conducted a phone survey of recreational rock lobster fishers in August and September 2020. The survey provided an opportunity to gauge the impact of the 2019/20 bushfires and the COVID-19 pandemic on the 2020/21 fishing season. The bushfire crisis occurred during the peak fishing period this season and because of the COVID19 situation the recreational lobster fishery was closed between the 1st April and 11th May. Given these events, the results of the survey provide important context for interpreting the 2019/20 (Season 3) trends.

Only 17% of respondents stated that the bushfires had an impact on their rock lobster fishing, while for the remaining 83% there was little or no impact on their expected fishing activity for the season. COVID-19 restrictions had a greater impact on fishing, with 59% of respondents having cancelled planned fishing trips due to the pandemic, while the remaining 41% had no plans to fish.

Of the responders who had not fished for rock lobster in the 2019/20 season, COVID-19 was most often listed as both the primary (17%) and secondary (32%) reason for not fishing. Other reasons recreational fishers did not participate in the 2019/20 season included work commitments, a lack of time, and weather.



Figure 1. Primary and secondary reasons registered Victorian recreational fishers did not fish for rock lobster in 2019/20 season. Sourced from FRDC project 2019/075.

Participation in the Tagging Program

Participation

The number of recreational fishers that have registered in the recreational rock lobster tagging program is 10894 over the three seasons of the program (2017/18, 2018/19, 2019/20). Over 5000 recreational rock lobster fishers registered an interest to fish (i.e., ordered tags) during Season 1 (2017/18), increasing to 5586 in Season 2 (2018/19) and 5712 in Season 3 (2010/20). There are 5134 fishers who have participated in one of the seasons, 2078 fishers have participated in two seasons and 2367 fishers have participated in all three seasons of the program. In Season 3, there were 2331 participants that were not registered for the previous season (2018/19) who registered for Season 3 and, of these 2038 were new participants to the program (not participating in either Season 1 or Season 2). There were 2025 participants that were registered for the previous season (2018/19) and 3866 participants in either Season 1 or Season 2 who did not register to participate in Season 3. Further analysis of participation rates in the Victorian recreational rock lobster fishery will be conducted as more data becomes available in future seasons.

Participation and Tag Use by Location

In all three seasons, the majority of participants that registered to fish for rock lobster were based in the larger coastal centres of Portland, Warrnambool, Geelong, Mornington and San Remo. The highest number of registered participants are concentrated in the Warrnambool area (3280 postcode) which had 444 registrations in Season 1, 447 in Season 2 and 444 in Season 3. This indicates that growth in registered fishers between Seasons 1 and 2 occurred outside this postcode area. It is important to note that a large number of participants are also based inland and travel to the coast to access the resource.

The highest number of tags used by registered participants in a postcode area occurred in Warrnambool (3280) in all three seasons, decreasing from 896 in Season 1 to 857 in Season 2 and further decreasing to 560 in Season 3. However, as the total number of tags reported used declined in Season 3, Warrnambool still contributed ~13% of all tags used that season, which is comparable to previous years. The Geelong postcode area (3228) had the second highest number of tags used in Season 1 with 343 tags reported, this reduced to 295 in Season 2. In Season 3 Geelong once again had the second highest number of tags reported in Season 2 after increasing from 273 in Season 1 to 331 in Season 3. In Season 3 Port Fairy returned to the third highest postcode to report tags used (154).



Figure 2 Number of participants registered in Season 3 (2019/20) compared with the average number of participants in Season 1 (2017/18) and Season 2 (2018/19) by the fishers' postcode in Victoria. Postcodes with less than 5 participants registered have been removed.



Figure 3 Number of tags reported as used in Season 3 (2019/20) compared with the average number of tags reported used in Seasons 1 (2017/18) and 2 (2018/19) by the postcode of registered fishers' in Victoria. The number of tags used in postcodes with less than 5 participants registered have been omitted for confidentiality.

Age Category and Tag Use of Participants

The majority of participants who registered to fish and ordered tags over the past three seasons were in the 30 - 40 age range (26% in 2017/18, 28% in 2018/19 and 28% 2019/20), while increases in the proportion of participants in the <20 to 30 age ranges have occurred since Season 1 (0.5% increase in <20 age range, 3.6% in 20 - 30 age range, 2% in 30 - 40 age range). The annual proportion of participants that fished (reported used tags) increased in the 20 to 40 age ranges (3% increase in both 20 - 30 and 30 - 40 age groups) and remained steady in the <20, 40 - 50, 60 - 70 and >80 age ranges (≤1% change), while the 50 - 60 age ranges exhibited a decline in reported used tags (3% decline).



Figure 4 Age demographics (grouped by decade) of all fishers registered (% annual total) in the recreational tagging program (left) and of those fishers who reported using tags (those who reported fishing) in Season 1 (2017/18), Season 2 (2018/19) and Season 3 (2019/20) (right).

Registered participants in the 40 – 50 age range reported the highest number of tags used over the past two seasons with 1563 in Season 2 (2018/19) and 1046 in Season 3 (2019/20). In Season 1 the 50 – 60 age range reported the highest number of tags used (1891) and are the second highest group to report used tags in Seasons 2 (1555) and 3 (875). Each age group reported fewer tags used in Season 2 compared to Season 1 except for the <20 age group. This declining trend across age groups (except <20) continued in Season 3 when less tags were reported used than in previous seasons, however, may have been exacerbated by events, such as bushfires and the covid-19 pandemic.



Figure 5 The number of tags reported used by participants in each age demographic group in Season 1 (2017), Season 2 (2018) and Season 3 (2019/20).

Catch Reporting Comparison

In Season 1, 29% of registered fishers reported catch. While the number of registered fishers continues to increase from Season 1 (2017/18), the number of users who reported catch reduced to 24% in Season 2 and 18% in Season 3. The number of tags reported as used in Season 2 decreased 14% from Season 1 and another 36% in Season 3. The number of tags reported as not used by fishers decreased by 20% and a further 25% decline in Season 3. Therefore, fewer unused tags are being reported or reconciled at the end of the season each year of the program. The number of tags issued has declined from 92326 in Season 1 to 79746 in Season 3. The proportion of tags annually that are not reconciled (i.e., the fate is unknown) has increased from 26% in Season 1 to 46% in Season 3. Overall, there has been a decline in the number of participants reporting used tags (catches) from over 1400 in 2017/18 to 1300 in 2018/19 and 1000 in 2019/20.



Figure 6 The number of registered fishers that reported a catch in Season 1 (2017/18), Season 2 (2018/19) and Season 3 (2019/20) as a percentage of total registered fishers (left). The number of tags reported as lost, not used, unused (right).

Summary of Seasons 1, 2 and 3

Numbers of Rock Lobster Harvested

A total of 7925 southern rock lobster were caught by recreational rock lobster fishers during Season 1 (2017/18). This decreased to 6834 in Season 2 (2018/19) and 4395 in Season 3 (2019/20). In the Eastern Zone 3856 rock lobster were reported caught in Season 1, 3101 in Season 2 and 1840 in Season 3. In the Western Zone, 4069 rock lobster were reported caught in Season 1, 3733 in Season 2 and 2555 in Season 3. Approximately 91% of the annual catch occurred in the Eastern Zone between the months of November to April in Season 1, this increased to 93.6% in Season 2. In the Western Zone, approximately 91.8% of the annual catch occurred between the months of November to April in Season 1 and increased to 94.6% in Season 2. This trend decreased to 77% in the East and 78% in the West caught between November and April in Season 3, due largely to reduced catch reported in April across both zones that corresponded to fishing closures as a consequence of covid-19 restrictions.



Figure 7 Number of tags used each month in the Eastern Zone (left) and Western Zone (right).

The number of eastern rock lobster reported as harvested by recreational rock lobster fishers has increased from 0 in 2017/18 to 60 reported in 2019/20. In Season 2, 86% of eastern rock lobster were taken from the Eastern Zone and 75% in Season 3. The majority of eastern rock lobsters were reported by fishers who were not in the citizen science program (86% in 2018/19 and 92% in 2019/20).

Analysis of Reported Carapace Length

The carapace lengths (CL) of lobster recorded by recreational fishers during Season 1 (2017/18), Season 2 (2018/19) and Season 3 (2019/20) were predominantly in the 11 to 15cm size class range (63.5%, 70% and 64% in the Eastern Zone, 69.4%, 71.0% and 68% in the Western Zone). In both Season 1 and Season 2, the Eastern Zone accounted for a greater number of larger lobster above 16cm CL than the Western Zone (23% in Season 1 and 22.3% in Season 2 in the East compared to 15% and 14.6% in the West). This trend continued in Season 3 where 23% of catch was above 16cm CL in the Eastern Zone compared to 16.5% in the Western Zone. However, in Seasons 1, 2 and 3 the Western Zone accounted for a greater proportion of smaller lobster below 12cm CL than the Eastern Zone (25.2%, 25.8% and 26.7% compared to 17.2%, 19.5% and 17%). These findings support anecdotal information from recreational fishers in that they are observing less lobsters that are generally larger in size in the Eastern Zone, and greater numbers of smaller lobsters in the Western Zone. Known recruitment



patterns that are largely driven from West to East are also supported by these findings. In Season 3, there was a 2% increase in number of 14 - 15 cm CL lobster in the Eastern Zone.

Figure 8 The relative frequency (% annual total) of lobsters caught by size class (carapace length) in season 1 (2017), season 2 (2018) and Season 3 (2019/20) in the Western and Eastern Zones.

Frequency of Tag Use and Reporting

In Season 1 (2017/18) and Season 2 (2018/19), the majority of participants reported using 2 tags (358 in Season 1 and 354 in Season 2) followed by 1 tag (284 in Season 1 and 287 in Season 2). While in Season 3, the number of participants who used one and two tags for the season was tied at 272. The majority of tags used were reported used via the online App on the day of capture. However, the number of participants reporting on the same day at capture has decreased from 60.9% in the 2017/18 Season to 54.6% in the 2018/19 Season. The number of participants reporting on the same day declined further in Season 3 to less than half of all tags reported (43%). The number of participants reporting tags after 14 or more days has increased from 14% in Season 1 (2017/18) to 21% in Season 3 (2019/20).



Figure 9 The number of tags used by participants in Season 1 (2017/18), Season 2 (2018/19) and Season 3 (2019/20).



Figure 10 The number of days between fishing (date caught) and the reporting of used tags (as percentage of annual total) by participants in Season 1 (2017/18), Season 2 (2018/19) and Season 3 (2019/20).

Citizen Scientist Data

Participation in the Citizen Science Program

Over 11% of registered fishers opted in to provide additional data through the citizen science program in Season 1 (2017/18) and 13% in Season 2 (2018/19) as a proportion of all registered fishers. The majority of catch from these participants were located in the Warrnambool region for the Western Zone and the Queenscliff region for the Eastern Zone. In Season 3, the number of fishers in the citizen science program declined to 11%. The number of citizen scientists that reported tags used (catch) as a proportion of the total number of registered fishers annually has declined from 4.7% in Season 1 to 3.4% in Season 3. Although the citizen science data provides a greater level of detail and is assumed to be of higher quality due to fisher avidity than general tag reporting, it is important to note that due to the low numbers of participants reporting into the program, the information may not accurately represent the overall performance of the fishery.



Figure 11 The number of registered fishers (as percentage of total number of registered fishers) that have opted into the citizen science program (left) and the number of citizen scientists that have reported catch (right).

The majority of tags used by citizen scientists over the past three seasons have been in the Warrnambool and Queenscliff regions. In Season 3, there was an increase from Season 2 in the number of tags used by citizen scientists as a proportion of the annual total in all regions except Queenscliff (0.7% decrease). Therefore, due to the lower number of recreational fishers and tags used in Season 3, the proportion of tags used by citizen scientists was slightly higher in most regions than in Season 2.



Figure 22 The number of tags used by citizen scientists as percentage of total tags used by all participants in each region.

Male/Female Catch by Citizen Scientists

The majority of female lobsters caught had a CL less than 14cm in Seasons 1, 2 and 3 (73%, 80% and 69%, respectively in the Eastern Zone and 96%, 93% and 92% respectively in the Western Zone). Males had a higher number of larger lobsters caught with a CL above 16cm than females in Seasons 1, 2 and 3 (36%, 43% and 51%, respectively in the Eastern and in the Western Zone 19%, 27% and 31%, respectively). In Seasons 2 and 3 a higher proportion of larger male lobsters were caught than females in both zones (on average 71% male in the East and 84% in the Western Zone over the past three seasons).



Size Class of Lobsters Caught (Carapace Length)

Figure 33 The number of tags used (as percentage of annual total for that sex and Zone) by citizen scientists for each class size.

Over the past three Seasons, the majority of Female rock lobster caught by citizen scientists weighed less than 1.5kg in the Eastern (67.1%, 62.4% and 65.6% in Seasons 1, 2, and 3 respectively) and Western (95.9%, 92.6% and 86.7%) Zones. Of the Male rock lobster caught by citizen scientists the majority weighed between 1 and 4 kgs in the Eastern (94.2%, 90.4% and 88.5% in Seasons 1, 2 and 3) and Western (86.4%, 86.6% and 87.5%) Zones.



Figure 44 The number of tags used (as percentage of annual total for each sex and Zone) by citizen scientists for each weight range of lobsters caught in season 1 (2017), season 2 (2018) and Season 3 (2019) in the Eastern and Western Zones.

Comparison of Fishing Methods Amongst Citizen Scientists

Free diving was the most popular method for targeting lobster in the Western Zone whilst SCUBA diving was the most popular method in the Eastern Zone. In both Zones the level of reporting of the fishing method increased from Season 1 to Season 2. In Season 3, however, reporting of fishing method dropped 36% in the Eastern Zone and 27% in the Western Zone.

In Seasons 1 and 2, SCUBA was the most efficient fishing method in both the Eastern and Western Zone. However, in Season 3, Hookah was the most efficient fishing method in the East, while SCUBA remained the most efficient fishing method in the Western Zone. Hoop netting was the least efficient method in the Western Zone and free diving in the Eastern Zone. Hoop net in the Eastern Zone and Hookah in the Western Zone were removed from the analysis due to insufficient data. Note that CPUE is inflated due to the lack of reporting of fishing events with no lobsters captured (i.e. only catch is reported and data on unsuccessful fishing trips is not collected).



Figure 55 The frequency of tags used by citizen scientists for each fishing method.



Figure 66 The average catch per hour by citizen scientists for each fishing method. Hoop net in the Eastern Zone and Hookah in the Western Zone are omitted due to the low prevalence of these methods preventing meaningful CPUE calculation. *Note that CPUE is inflated due to no data collected on 'zero catch' fishing trips.

Citizen Scientist Reporting

In Season 1 (2017/18) and Season 2 (2018/19), over 64% of lobster that were reported as used via the online App were reported on the day of capture. However, in Season 3 the number of citizen science participants that recorded used tags on the day of capture decreased 14% on the previous season. There was a 6% increase in participants reporting catch one day after capture in Season 3 compared with Season 2. Reporting on the day of capture provides a greater level of confidence in the reported data with an assumed increased accuracy of details relevant to reporting time lags, e.g., recall errors. The number of participants that reported used tags 14 or more days after capture has increased 4% since Season 1.



Figure 77 The number of days between fishing (date caught) and the reporting of used tags (as percentage of annual total) by citizen scientists in Season 1 (2017), Season 2 (2018) and Season 3 (2019).

Comparison of Seasons

Table 1 Summary of comparisons between Season 1, 2 and 3. Completeness is the number of complete records (reports) for the factor as a percentage of the total tags used each year or as a total of the tags used over the duration of the program.

Factor	Participants	Weight Fished (kg)	Sex Fished	Length Fished (Carapace Length cm)	Victorian Fishers	Number Taken	Weight Taken	Weight Taken (% of TACC)
Program Average		Mean = 1.9 East = 2.0 West = 1.7 11.8% completeness	Male = 66.7% Female = 33.3% 14.8% completeness	Mean = 13.5 East = 13.8 West = 13.2 100% completeness	99.30%			
2017	5092	Mean = 1.7 East = 1.8 West = 1.6 10.8% completeness	Male = 71.5% Female = 28.5% 13.4% completeness	Mean = 13.6 East = 13.9 West = 13.3 100% completeness	99.60%	East = 3857 West = 4069	East = 6940.8 kg West = 6510.4 kg	East = 11.8% West = 2.8%
2018	5586	Mean = 1.9 East = 2.0 West = 1.7 11.2% completeness	Male = 65% Female = 35.0% 14.1% completeness	Mean = 13.5 East = 13.7 West = 13.2 100% completeness	99.10%	East = 3107 West = 3734	East = 6202.0 kg West = 6346.1 kg	East = 15.5% West = 2.6%
2019	5712	Mean = 1.9 East = 2.1 West = 1.7 13.7% completeness	Male = 71.1% Female = 28.9% 16.9% completeness	Mean = 13.6 East = 14.0 West = 13.3 100% completeness	99.50%	East = 1840 West = 2555	East = 3864.0 kg West = 4343.5 kg	East = 9.7% West = 1.8%

Evaluation of Citizen Science Program

Table 2 Summary of the citizen science program. Completeness is the number of complete records (reports) for the factor as a percentage of the total tags used each year (2017, 2018. 2019) or as a total of the tags used over the duration of the program by citizen scientists.

Factor	Participants	Participants who used tags	Weight Fished (kg)	Sex Fished	Length Fished (Carapace Length cm)	Catch per Hour (CPUE)	Victorian Fishers
Program Average			Mean = 1.7 East = 1.9 West = 1.4 54% Completeness	Male = 67.2% Female = 32.8 % 74.0% Completeness	Mean = 13.7 East = 14.0 West = 13.4 100% Completeness	Mean = 1.3 East = 1.7 West = 1.0	99.60%
2017	600	243	Mean = 1.7 East = 1.9 West = 1.4 48.5% Completeness	Male = 61.7% Female = 38.3% 60.4% Completeness	Mean = 13.6 East = 14.0 West = 13.3 100% Completeness	Mean = 1.3 East = 1.5 West = 1.0	99.80%
2018	685	235	Mean = 1.9 East = 2.0 West = 1.4 61.0% Completeness	Male = 64.5% Female = 35.5% 77.5% Completeness	Mean = 13.7 East = 14.0 West = 13.5 100% Completeness	Mean = 1.5 East = 1.9 West = 1.1	99.30%
2019	652	194	Mean = 1.8 East = 2.0 West = 1.5 68% Completeness	Male = 75.4% Female = 24.6% 84.2% Completeness	Mean = 14.2 East = 14.9 West = 13.7 100% Completeness	Mean = 1.2 East = 1.6 West = 0.8	99.9%

Compliance

The VFA has undertaken a state-wide initiative with Fisheries Officers to collect details when conducting an inspection of recreational rock lobster fishers to enable comparisons of data reported through the App. The details of date, location, carapace length, sex, weight, method and dive time are recorded. This has enabled Fisheries Officers to follow-up with inaccurate reporting and provide greater confidence in data collected through the program.

Fisheries Officers recorded the details of 132 recreational rock lobster tags during Season 3 of the tagging program. An analysis of the recorded tags has found that 101 tags(76%) were reported accurately as 'Used'. All 101 tags were reported accurately by Zone (East or West), 92 tags were reported with the correct date and only 32 were reported with the correct carapace length as observed by Fisheries Officers.

A breakdown of the 31 tags that were considered to have been reported inaccurately is as follows:

- 3 tags remained as unreported or 'unused';
- 25 tags were reported incorrectly as 'Not used'
- 3 tags were reported as 'Lost'.

Methods

This report is based on catch data reported for Season 1 (2017/18), Season 2 (2018/19) and Season 3 to VFA until 11/12/2020.

To ensure the quality and robustness of the analysis some data filtering occurred. The following is a list of the filters and calculations that were applied to the data:

Season-preliminary data from the 2020/21 season was excluded from this analysis.

Participation-individual fishers were identified from email addresses each season.

Date fished-In cases where the date fished occurred after the date that a used tag was reported, the data was excluded.

Age of participants - Participants who listed their age as less than 18 or over 100 were excluded from the analysis.

Weight of catch- the reported weights were excluded if less than 0.5 kg or more than 6 kg. There are some reported weights of 500 – 800 that are assumed to be measured in grams, however, were excluded.

Total weight Taken Estimates- calculated from the mean weight of the citizen science data.

Catch per hour (CPUE)- calculated from the citizen science data.

Days to report-Measured as a count of the days from the date fished to date reported. All values over 14 days were allocated a greater than 14 days value.

Personal data- was excluded if there were less than 5 samples to de-identify the fishers, such as the postcode of registered users.

To calculate the total catch weight, the mean weights recorded by the citizen science program were applied to the weight in numbers from the overall dataset.

Informing the Annual Rock Lobster Stock Assessment Process

The annual stock assessment process has previously included a notional recreational catch share equivalent to five and ten percent of the commercial Total Allowable Commercial Catches (TACCs) for the Western Zone and Eastern Zone, respectively. Through the Recreational Rock Lobster Tagging Program, the VFA is now in a position to obtain an estimate of the annual recreational catch by using the number of tags used in each zone for that season, to represent the number of rock lobsters removed from the stock.

Data on the actual number of lobsters harvested by the recreational sector, combined with the known catch under the quota managed commercial fishery, is now used to inform stock assessments. This has resulted in the existing notional assumption of recreational catch that has fed into the Rock Lobster Stock Assessment model being replaced with actual numbers of lobster removed by the recreational sector, therefore improving the accuracy of annual biomass estimates and modelled future fishery trajectories. Continuing to obtain accurate data on the total removal of rock lobster from the stock in Victoria is integral to managing a sustainable and healthy fishery into the future.



