



<b>Project name:</b> Suntag 2019-2020	<b>Organisation:</b> Suntag Australia Incorporated
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<b>MILESTONE REPORT:</b>	<b>MILESTONE 4 QUARTER 1 (Q1) 2020-21</b>
<b>REPORT PERIOD:</b>	<b>JULY - SEPTEMBER 2020</b>
<b>MILESTONE DATE:</b>	<b>31 OCTOBER 2020</b>
<b>REPORT DATE:</b>	<b>22 OCTOBER 2020</b>
<b>REPORT PREPARED BY:</b>	<b>BILL SAWYNOK</b>

## MILESTONE REPORT REQUIREMENTS

### Suntag

1. The number of registered taggers in the Queensland program
2. Number of new taggers in program
3. Number of fish tagged each quarter by species
4. Number of tag recaptures by species

### Targets for 2019-20

1. Tag 20,000 fish (revised to 15,000 due to COVID-19)
2. Record 1,500 recaptures
3. Registered taggers in range of 400-500
4. Upgrade database
5. Provide data to researchers and others

## MILESTONE 4 REPORT - SUMMARY

### SUNTAG SUMMARY 2019-2020 AND Q1 2020-2021

#### SUMMARY OF YEAR NUMBERS

MEASURE	Q1	Q2	Q3	Q4	2019-20	Q1
REGISTERED TAGGERS	439	430	436	441	441	380
NEW TAGGERS	27	23	14	22	86	10
ACTUAL TAGGERS	217	321	166	143	504	193
FISH TAGGED	4,064	5,079	3,432	3,933	16,508	4,189
FISH RECAPTURED	314	559	465	373	1,711	301

## Suntag Q1 2020-2021 Highlights

### Development of Information Products

With 1.4 million fish records in the database the focus in Q1 of 2020-21 has been on the development of information products using the data collected over 30 years. There are many uses for the data, even more so when combined with other datasets, however making that available in a format that is useful, particularly to influence decision making, is a challenge.

Suntag's strategic partnership with Infofish Australia has enabled that challenge to be met. The use of Crystal Bowl dashboards that are continually updated that focus on species, locations, challenges or issues (eg Covid-19) provide data in an easily digestible format.

Dashboards will continue to be developed covering a wide range of interests, issues and locations.

### Impact of COVID-19

Recaptures of tagged fish are being used as a random sample of the fisher population to assess the impact of Covid-19 on recreational fishing in Queensland. This is one of the few objective measures available and is a low-cost approach providing data in near real time.

The assessment includes a comparison of 2020 with 2019:

- fisher effort (number of recaptures) and
- fisher behaviour (distance travelled to go fishing)
- effect of border closures (interstate recaptures)

While it is not possible to measure the actual distance travelled both on land and on water the straight-line distance between the fisher's address (or postcode) and the recapture location is used as an approximation however is an underestimate.

Assessments are made at a number of levels:

- All of Queensland
- South East Queensland estuaries (Noosa to Gold Coast)
- Regional Fitzroy River
- South East Queensland Bass impoundments (6 impoundments)
- Lake Awoonga Barramundi impoundment (added in Q1)

Dashboards provide assessments for each of those locations and are updated daily and distributed monthly. All the feedback received so far has been very positive and this assessment process has now been incorporated into a broader FRDC project.

In summary the initial impact of Covid-19 was short-lived from Mar-Jul. There was little impact in SEQ estuaries and Bass impoundment fishing bounced back strongly after most impoundments were closed during Apr. The impact in the Fitzroy River was greatest with the bounce back starting after winter but subdued compared to 2019. There was little if any impact at Lake Awoonga. However, the strong upward trend in the last 3 months of 2019 is not being reflected to the same extent in 2020.

Part of the summary of the statewide assessment of the impact of COVID-19 on recreational fishing in Queensland.

MEASURE	ACTUAL	GRAPH																		
<b>QUEENSLAND</b>		<b>STATEWIDE PERSPECTIVE</b>																		
<b>Number of recaptures</b>	<table border="1"> <thead> <tr> <th></th> <th>2020</th> <th>2019</th> </tr> </thead> <tbody> <tr> <td>Jun</td> <td>120</td> <td>76</td> </tr> <tr> <td>Jul</td> <td>81</td> <td>99</td> </tr> <tr> <td>Aug</td> <td>89</td> <td>82</td> </tr> <tr> <td>Sep</td> <td>99</td> <td>123</td> </tr> <tr> <td>YTD</td> <td>1089</td> <td>1143</td> </tr> </tbody> </table>		2020	2019	Jun	120	76	Jul	81	99	Aug	89	82	Sep	99	123	YTD	1089	1143	
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<b>Cumulative recaptures Jan-Sep 2020-2019</b> <b>Dots show recaptures by interstate fishers</b>	Sep 2020-2019 -19.5% Interstate fishers Jan-Sep 2020 21 2019 18																			
<b>Cumulative recaptures Jan-Dec 2020-2019</b> <b>Dots show recaptures by interstate fishers</b>	2020-2019 Jan-Sep -4.7%																			

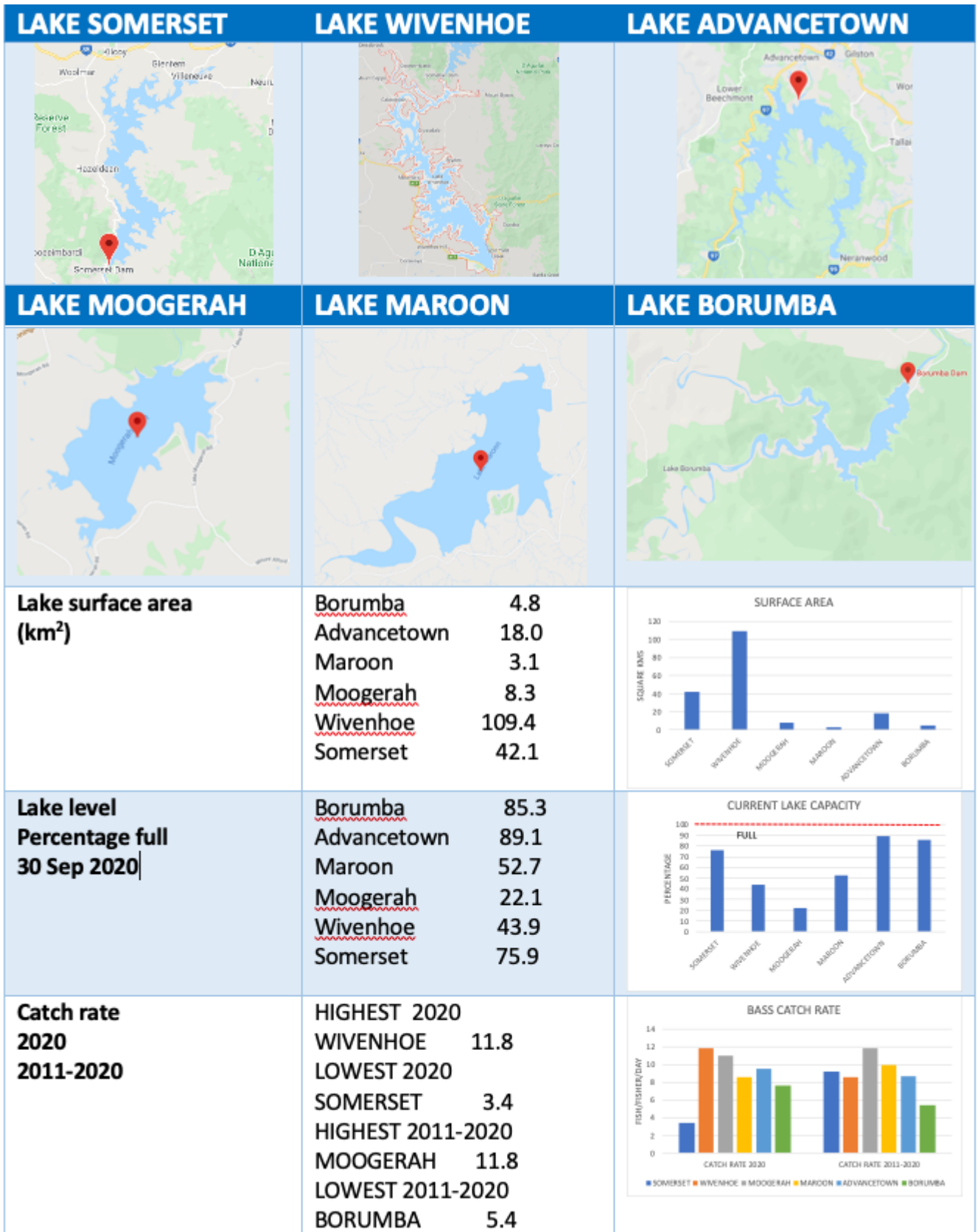
### Monitoring Bass in SEQ impoundments



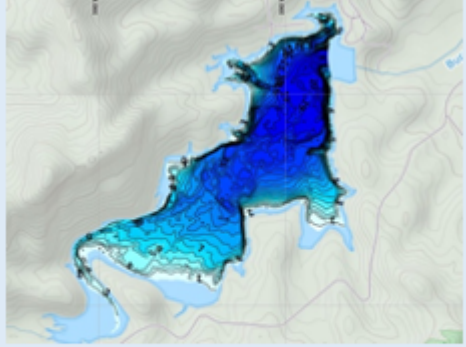

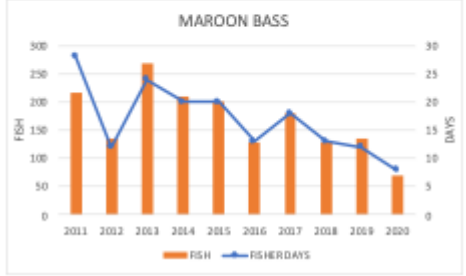
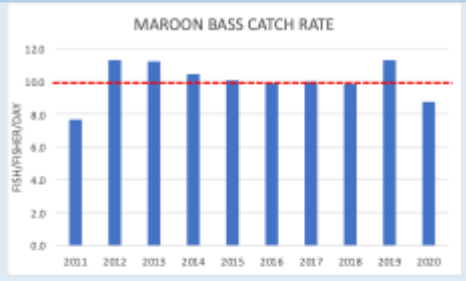
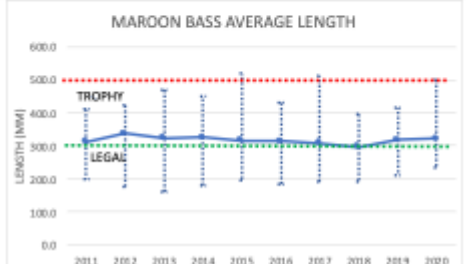
The responsibility for monitoring of impoundments has shifted from Fisheries Qld to stocking groups. It will take some time for what that means in practical terms to eventuate. In the meantime, there is already a significant amount of data available through Suntag and other datasets that stocking groups can use.

Crystal Bowl dashboards have been developed for Australian Bass in 6 impoundments that fringe SEQ from Lake Advancetown behind the Gold Coast to Lake Borumba adjacent to the Sunshine Coast. A summary dashboard provides a comparison of impoundment status, catch rates for T20 fishers (taggers), fish lengths, trophy fish, recaptures, growth rates and fish spillage. This is updated and distributed monthly.

Separate dashboards are then available for each impoundment providing a 10 year timeline of catch rates, fish lengths, growth, grid locations of tagged fish, recaptures external to the impoundment and postcodes of fishers recapturing fish (indicating where fishers are coming from to fish the impoundment). Infish can then add bathymetry, bottom habitat, fish counts and size gradings to provide as complete a picture of an impoundment as possible.

Part of the summary dashboard for Bass in SEQ impoundments.



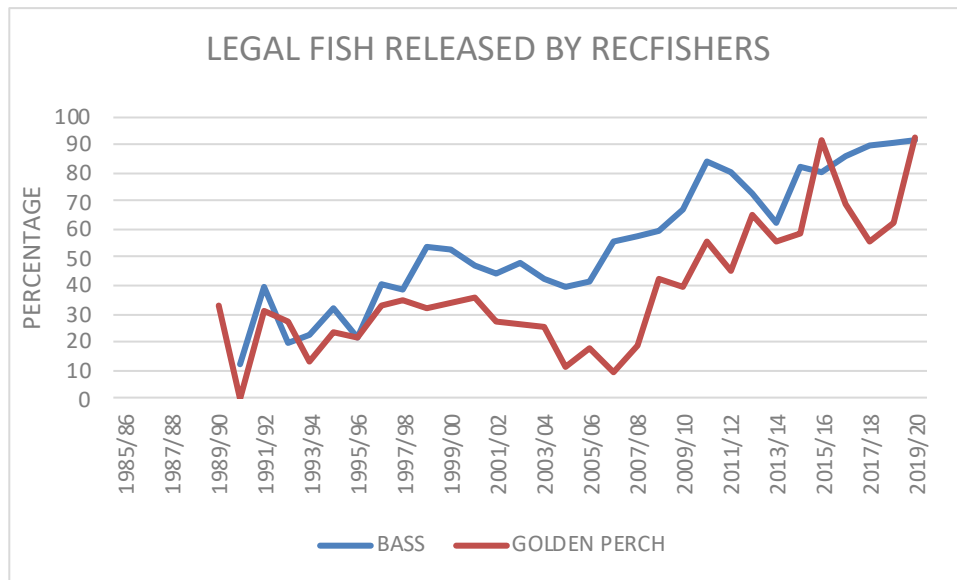
LAKE MAROON	AUSTRALIAN BASS	BATHYMETRY														
																
MEASURE	ACTUAL	GRAPH														
<p><b>Surface area</b> <b>Lake level</b></p>	<p>Surface area 3.1km<sup>2</sup> Level at 30 September 2020 52.7% For latest level <a href="https://www.seqwater.com.au/historic-dam-levels">https://www.seqwater.com.au/historic-dam-levels</a></p>															
<p><b>Catch and effort</b> <b>number of fish</b> <b>fisher days</b> <b>T20 fishers</b> <b>2011-2020</b></p>	<table border="0"> <tr> <td>HIGHEST</td> <td>LOWEST</td> </tr> <tr> <td>CATCH</td> <td></td> </tr> <tr> <td>2013</td> <td>2019</td> </tr> <tr> <td>269</td> <td>136</td> </tr> <tr> <td>EFFORT</td> <td></td> </tr> <tr> <td>2011</td> <td>2019</td> </tr> <tr> <td>28</td> <td>12</td> </tr> </table>	HIGHEST	LOWEST	CATCH		2013	2019	269	136	EFFORT		2011	2019	28	12	
HIGHEST	LOWEST															
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<p><b>Catch rate</b> <b>Fish/fisher day</b> <b>2011-2020</b></p>	<table border="0"> <tr> <td>HIGHEST</td> <td>LOWEST</td> </tr> <tr> <td>CATCH RATE</td> <td></td> </tr> <tr> <td>2019</td> <td>2011</td> </tr> <tr> <td>11.3</td> <td>7.7</td> </tr> <tr> <td>10 YEAR AVERAGE</td> <td>10.0</td> </tr> <tr> <td><b>2020</b></td> <td><b>8.6</b></td> </tr> <tr> <td colspan="2"><b>(insufficient days)</b></td> </tr> </table>	HIGHEST	LOWEST	CATCH RATE		2019	2011	11.3	7.7	10 YEAR AVERAGE	10.0	<b>2020</b>	<b>8.6</b>	<b>(insufficient days)</b>		
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<p><b>Average length (mm)</b> <b>2011-2020</b></p>	<table border="0"> <tr> <td>HIGHEST</td> <td>LOWEST</td> </tr> <tr> <td>2012</td> <td>2018</td> </tr> <tr> <td>337</td> <td>296</td> </tr> <tr> <td>LARGEST</td> <td></td> </tr> <tr> <td>2015</td> <td>2020</td> </tr> <tr> <td>520</td> <td>500</td> </tr> </table>	HIGHEST	LOWEST	2012	2018	337	296	LARGEST		2015	2020	520	500			
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## Data requests 2020-21 Q1

Data requests for the quarter were:

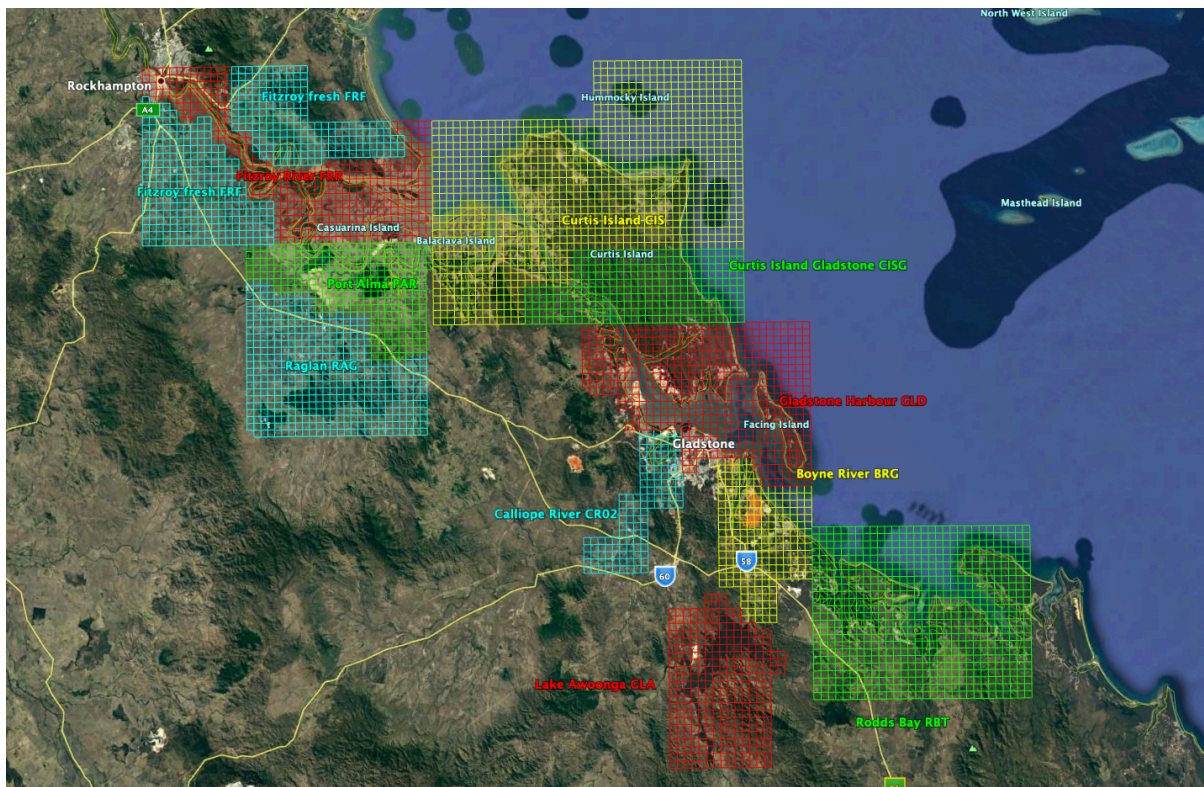
- Release rates of recaptured Golden Perch for Ecology Australia project on the Murray River.



## Database Upgrade

Database upgrade has shifted to 2020-21 Q2-Q4. Covid-19 impacted on the database upgrade and has been delayed due to other priority projects. However, work was completed on the upgrading and updating of 311 tag grid maps. These were all upgraded as Google Earth maps with most fishers now using GE. Maps are now available as individual maps, for catchments, for regional areas or in any configuration to suit individual tagger's needs.

Maps available for the Rockhampton – Gladstone area

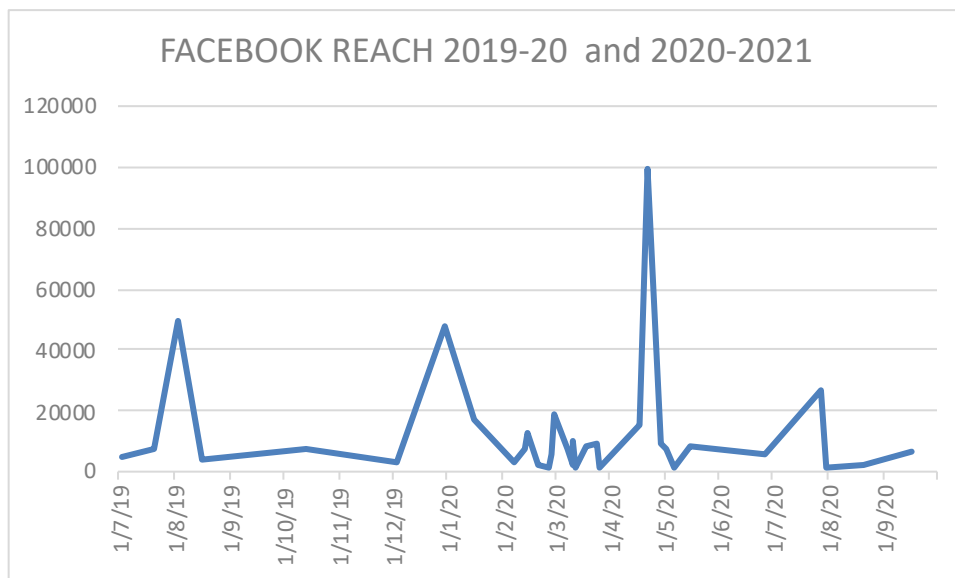


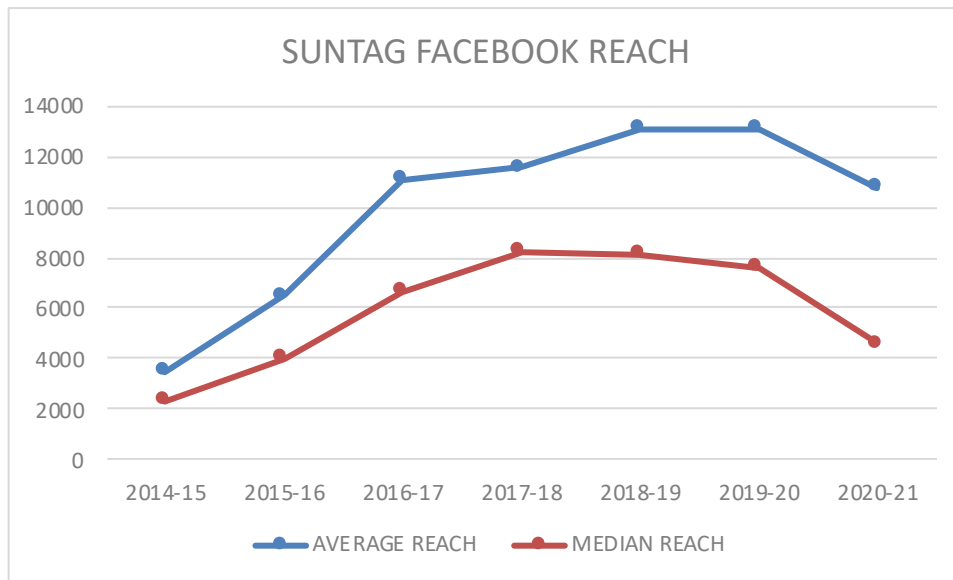
## Suntag Social Media 2020-21 Q1

There were 29 posts in 2019-20 for an average reach of 13,094. In Q1 for 2020-21 there were 4 posts for an average reach of 9,102. Statistics for the current year and last year are shown in the accompanying table. The Suntag Instagram account was reactivated in 2019-20 Q3.

2019-20 Q4 saw the post with the highest reach ever with 99,140 for a Barramundi that moved over 1,000km from Bedford Weir down the Fitzroy River then north along the coast to the Proserpine River.

Period	Posts 2019-20	Average reach 2019-20	Posts 2020-21	Average reach 2020-21
Q1	4	16,469	4	9,102
Q2	3	19,467		
Q3	15	7,129		
Q4	7	20,777		
Year	29	13,094		





The Suntag Instagram account was reactivated in 2019-20 Q3. There are now over 3,000 followers on Instagram. However, the focus has shifted to My Story where there has been a strong response.

### Instagram

Year	Period	Posts	Follows
2019-2020	Q1	0	0
	Q2	0	0
	Q3	25	2,028
	Q4	30	3,466
	Q1-Q4	55	3,466
2020-2021	Q1	8	3,047

### My Story

Year	Period	Posts	Reach
2020-2021	Q1	65	7,028

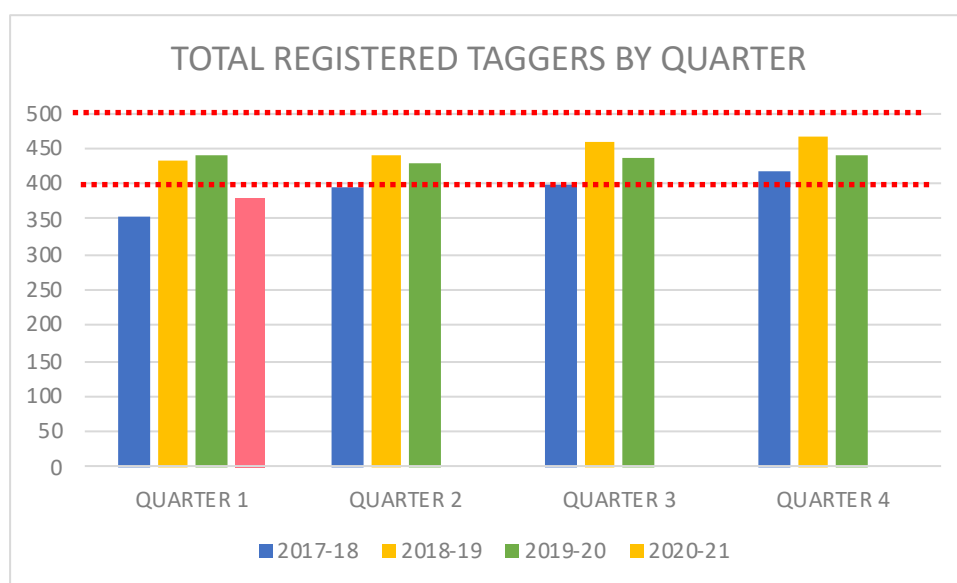


## SUNTAG - REPORTING MILESTONE REQUIREMENT 1

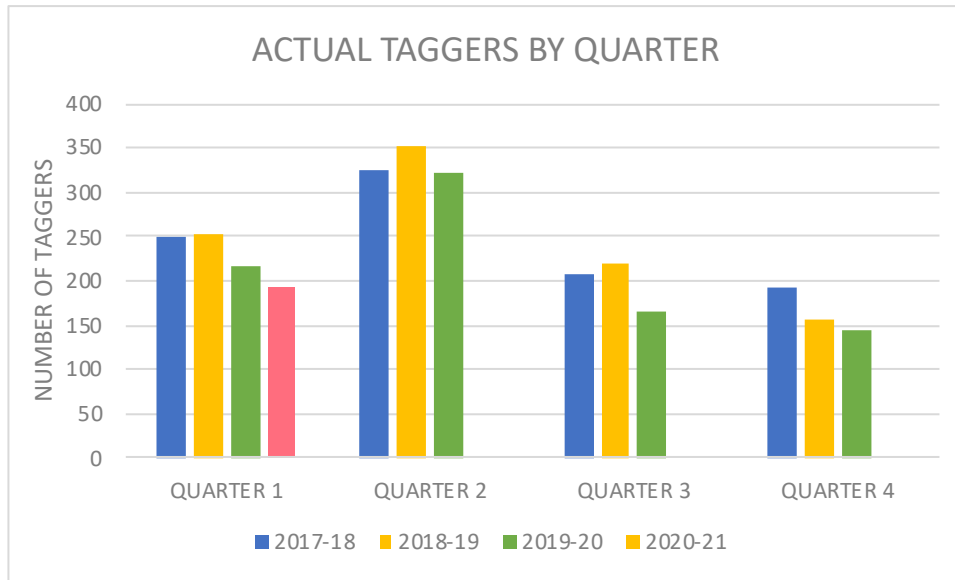
### *The number of registered taggers in the Queensland program*

The following are the numbers of taggers registered at the end of each quarter and the number of fishers that actually tagged fish each quarter. Target range for registered taggers is 400-500 (red dotted lines on graph). Taggers are now registered on an annual basis for 1 year from date of joining. Registered tagger numbers have fallen slightly to 380 and below the target range with new taggers being offset by taggers not re-registering. Covid-19 has had an impact on some members not re-registering. Registered tagger numbers are expected to get back into the target range in Q2.

Period	Registered taggers 2020-21	Registered taggers 2019-20	Registered taggers 2018-19	Registered taggers 2017-18
<b>Q1</b>	380	439	430	352
<b>Q2</b>		430	441	396
<b>Q3</b>		436	459	399
<b>Q4</b>		441	467	419
<b>Year</b>	380	441	467	419



Period	Actual taggers 2020-21	Actual taggers 2019-20	Actual taggers 2018-19	Actual taggers 2017-18
<b>Q1</b>	193	217	244	249
<b>Q2</b>		321	330	324
<b>Q3</b>		166	221	207
<b>Q4</b>		143	156	193
<b>Year</b>	193	504	689	589

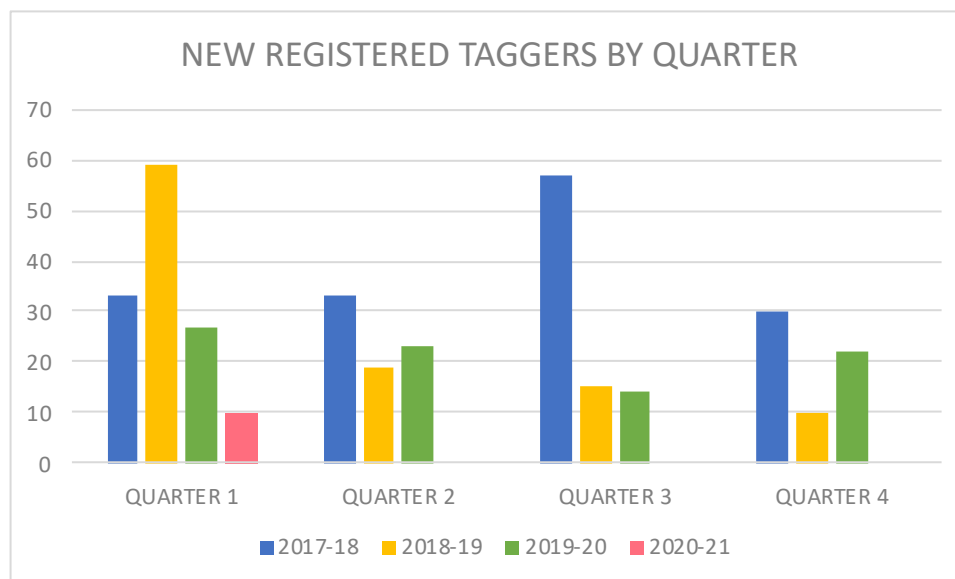


## SUNTAG - REPORTING MILESTONE REQUIREMENT 2

### *Number of new taggers in the program*

The following are the numbers of new taggers registered each quarter compared with the numbers in the previous years. Taggers are now registered on an annual basis for 1 year from date of joining. Numbers fluctuate with new members joining being offset by some members not renewing. It is likely that Covid-19 has had an impact on the number of new taggers for 2020-21 Q1.

Period	New taggers 2020-21	New taggers 2019-20	New taggers	New taggers 2017-18
Q1	10	27	59	33
Q2		23	19	33
Q3		14	15	57
Q4		22	10	30
Year		64	103	153



The following 60 clubs (some members), stocking groups, fishing businesses and others are registered with Suntag or have used the services of Suntag for tagging and monitoring in 2019-2020 and 2020-21.

- Suntaggers (individual members)
- Capricorn Tag and Release Sportfishing Club (Captag)
- Gladstone Sportfishing Club
- Brisbane Valley Anglers
- Ipswich United Sportfishing Club
- Southern Brisbane Sportfishing Club
- Bundaberg Sportfishing Club
- Mossman Sportfishing Club
- Endeavour Sportfishing Club
- Townsville Saltwater Fisherman's Club
- Townsville Sportfishing Club
- Hinchinbrook Sportfishing Club
- Cungulla Fishing Club
- Pine Rivers Fish Management Association
- SEQ Water
- Freshwater Fishing and Stocking Association of Queensland
- Fitzroy River Fish Stocking Association
- Mackay Area Fish Stocking Association
- Mackay Recreational Fishing Alliance
- Catchment Solutions
- Emerald Fish Stocking Association
- Gladstone Area Water Board
- Bond University
- Rockhampton Regional Council
- Gladstone Ports Corporation
- Mackenzie River Fish Stocking Association
- Moura Fish Stocking Association
- Monduran Anglers and Stocking Association
- Twin Cities Fish Stocking Association
- Lake Moondarra Fish Stocking Association
- Cairns Area Fish Stocking Association
- Tablelands Fish Stocking Association
- Lake Borumba Fish Stocking Association
- Caboolture Fish Stocking Association
- Holloways Beach Environmental Education Centre
- Lively Lures
- Fishing Monthly Magazine
- Stones Corner Marine
- Rocky Barra Bounty
- Boyne Tannum Hookup
- Women That Fish
- Extreme Fishing Solutions
- CQ Fishing Adventures
- Copperlode Fish and Kayak
- ABT fishing tournaments
- Bait Tackle Store
- Hooked Fishing Charters
- Gladstone Fly and Sportfishing
- Fish that Snag
- Hard Yakka Kayaker
- Crazy Tail Twisted Leaders
- Twin River Lures
- Ingham Rod and Reel Fishing Club
- Casting Cowboys
- Barra World
- Rustys Barra Charters
- Weipa Bluewater Charters
- Sunshine Coast Fishing
- Ecology Australia

## SUNTAG - REPORTING MILESTONE REQUIREMENT 3

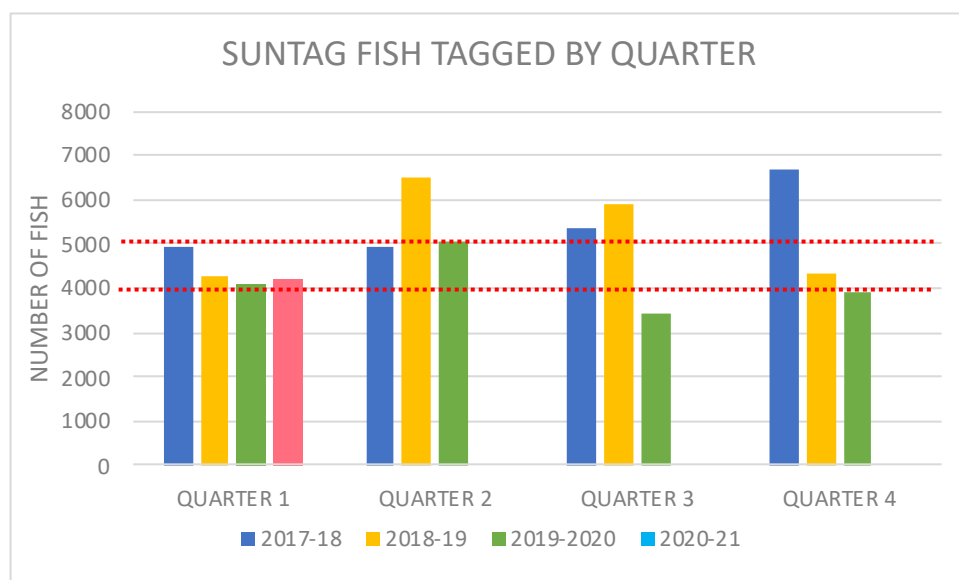
### *Number of fish tagged each quarter by species*

The numbers of fish tagged each quarter and the numbers of fish tagged by species are shown below. The numbers in some quarters will continue to increase as late records are submitted, particularly for 2020-21 Q1 as there are known outstanding records. Numbers in 2019-20 Q3 and Q4 were impacted by restrictions and uncertainties resulting from COVID-19.

Dotted lines on the graph show the target range for fish tagged each quarter. The initial target for 2019-20 was 5,000 however this was revised down to 4,000 due to the restrictions imposed by Covid-19. The initial target for tagged fish was 20,000 however this was revised down to 15,000. This target was exceeded with 16,508 fish tagged.

The initial target for 2020-21 is 20,000 fish tagged or 5,000 fish per quarter. There are currently 4,189 tagged fish in the database for 2020-21.

Period	Fish tagged 2020-21	Fish tagged 2019-20	Fish tagged 2018-19	Fish tagged 2017-18
<b>Q1</b>	4,189	4,064	4,292	4,928
<b>Q2</b>		5,079	6,529	4,950
<b>Q3</b>		3,432	5,892	5,366
<b>Q4</b>		3,933	4,314	6,672
<b>Year</b>	4,189	16,508	21,027	21,916



### FISH TAGGED BY SPECIES

SPECIES	2019-20 Q1	2019-20 Q2	2019-20 Q3	2019-20 Q4	2019-20 TOTAL	2020-21 Q1
BARRAMUNDI	1071	1219	675	503	3537	791
AUSTRALIAN BASS	602	930	385	531	2520	624
DUSKY FLATHEAD	575	285	170	392	1487	398
BARRED JAVELIN	109	363	562	373	1413	268
MANGROVE JACK	170	622	388	65	1258	286
YELLOWFIN BREAM	256	177	122	366	949	275
PIKEY BREAM	109	195	126	279	721	187
GOLDSPOTTED ROCKCOD	114	213	193	145	673	145
BLACKSPOTTED ROCKCOD	135	155	42	36	378	84
GIANT TREVALLY	69	66	62	108	335	61
BLUE THREADFIN	120	53	12	77	267	94
SPECKLED JAVELIN	7	59	119	73	259	18
GOLDEN SNAPPER	76	56	86	38	256	202
GOLDEN PERCH	6	162	48	19	237	25
KING THREADFIN	62	108	18	46	236	93
SNAPPER	75	29	51	67	223	62
PEARL PERCH	45	32	48	41	163	30
RED EMPEROR	60	25	26	55	165	51
GRASS EMPEROR	35	15	79	18	155	16
MULLOWAY	23	21	25	66	162	37
SOOTY GRUNTER	67	25	9	2	104	15
REDTHROAT EMPEROR	34	11	3	36	84	88
SOUTHERN SARATOGA	8	42	14	8	72	4
BARCHEEK CORAL TROUT	27	12	12	17	71	25
BLACK JEWFISH	7	24	24	11	66	15
SPANGLED EMPEROR	26	2	5	6	41	8
MURRAY COD	19	7	6	1	33	0
COMMON CORAL TROUT	11	10	8	3	32	15
SWALLOWTAIL DART	19	0	8	1	29	18
OTHER SPECIES	127	161	106	197	582	254
<b>TOTAL</b>	<b>4064</b>	<b>5079</b>	<b>3432</b>	<b>3580</b>	<b>16508</b>	<b>4189</b>

## SUNTAG - REPORTING MILESTONE REQUIREMENT 4

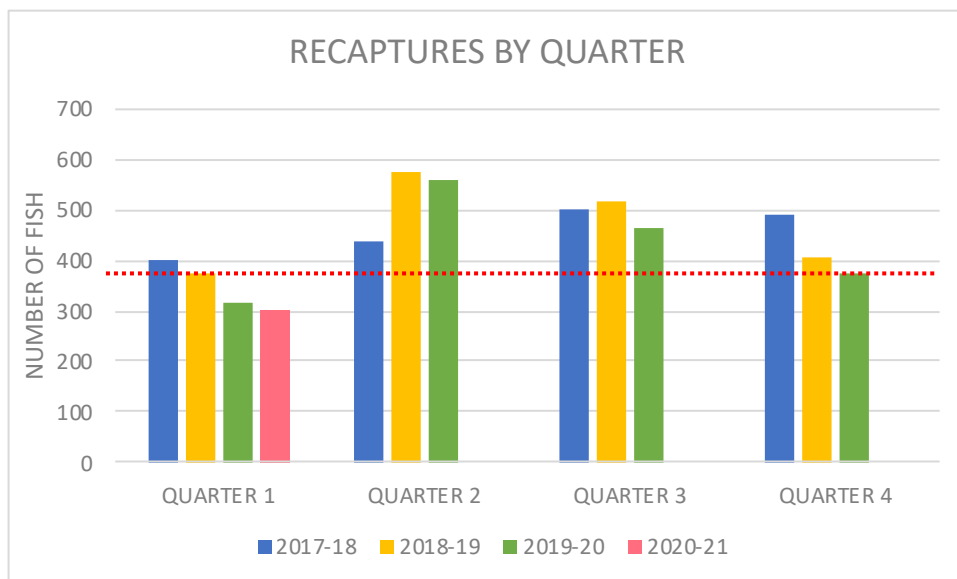
### *Number of tag recaptures*

The following are the numbers of recaptures for each quarter and the numbers of recaptures for each species. The numbers in some quarters will increase with late reporting of recaptures.

Numbers of recaptures in Q3, Q4 in 2019-20 and Q1 in 2020-21 were impacted by COVID-19.

The target for recaptures for 2019-20 was 1,500 or 375 for each quarter. The dotted line on the graph shows the target number of recaptures for each quarter. Recaptures for 2020-21 Q1 were 301 but will increase a little with late reports. Total recaptures for 2019-20 was 1,711 and exceeded the target.

Period	Recaptured 2020-21	Recaptured 2019-20	Recaptured 2018-19	Recaptured 2017-18
<b>Q1</b>	301	314	374	398
<b>Q2</b>		559	576	435
<b>Q3</b>		465	518	498
<b>Q4</b>		373	406	492
<b>Year</b>	301	1,711	1,874	1,823





### FISH RECAPTURED BY SPECIES

SPECIES	2019-20 Q1	2019-20 Q2	2019-20 Q3	2019-20 Q4	2020-21 Q1
<b>BARRAMUNDI</b>	93	208	183	70	72
<b>AUSTRALIAN BASS</b>	102	134	74	124	94
<b>MANGROVE JACK</b>	13	63	49	14	7
<b>GOLDSPOTTED ROCKCOD</b>	8	21	49	26	11
<b>DUSKY FLATHEAD</b>	26	15	19	35	21
<b>PIKEY BREAM</b>	9	15	14	18	16
<b>KING THREADFIN</b>	14	20	11	8	8
<b>BARRED JAVELIN</b>	4	11	15	11	13
<b>BLACKSPOTTED ROCKCOD</b>	5	14	5	12	12
<b>YELLOWFIN BREAM</b>	3	5	3	12	6
<b>GOLDEN SNAPPER</b>	1	5	9	2	1
<b>SOUTHERN SARATOGA</b>	0	10	6	1	4
<b>GOLDEN PERCH</b>	4	10	0	1	5
<b>RED EMPEROR</b>	8	3	0	3	6
<b>MULLOWAY</b>	3	2	2	3	0
<b>GRASS EMPEROR</b>	1	1	5	3	1
<b>GIANT TREVALLY</b>	3	4	0	0	1
<b>REDTHROAT EMPEROR</b>	4	0	0	2	2
<b>SNAPPER</b>	2	1	0	2	0
<b>SADDLETAIL SNAPPER</b>	2	1	0	0	1
<b>OTHER SPECIES</b>	9	17	21	26	20
<b>TOTALS</b>	314	559	465	373	301