



Project name: Suntag 2020-21	Organisation: Suntag Australia Incorporated
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MILESTONE REPORT:	QUARTER 2 (Q2)
REPORT PERIOD:	OCTOBER-DECEMBER 2020
MILESTONE DATE:	31 DECEMBER 2020
REPORT DATE:	17 JANUARY 2021
REPORT PREPARED BY:	BILL SAWYNOK

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 2020-21

1. Tag 20,000 fish
2. Record 1,500 recaptures
3. Registered taggers in range of 400-500
4. Upgrade database
5. Information distribution through 20-25 dashboards

MILESTONE Q2 REPORT - SUMMARY

SUNTAG SUMMARY 2020-21

SUMMARY OF YEAR NUMBERS

MEASURE	Q1	Q2	Q3	Q4	2020-21
REGISTERED TAGGERS	400	405			405
NEW TAGGERS	10	32			42
ACTUAL TAGGERS	190	170			243
FISH TAGGED	4,578	5,034			9,002
FISH RECAPTURED	307	340			647
DASHBOARDS	8	17			17

Suntag Highlights Q2

Impact of COVID-19

It is important to understand the impact of Covid-19 on the economy and society however there are very few objective ways to measure its impact on recreational fishing. Soon after the start of the pandemic Infofish Australia used the recapture of tagged fish as a random sample of the fishing population to see if it was possible to detect changes in fishing effort and fisher behaviour.

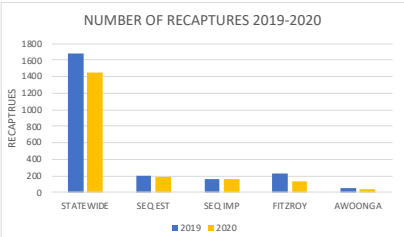
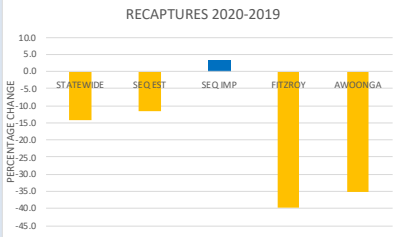
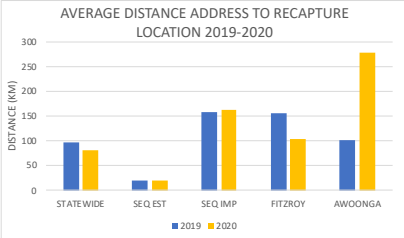
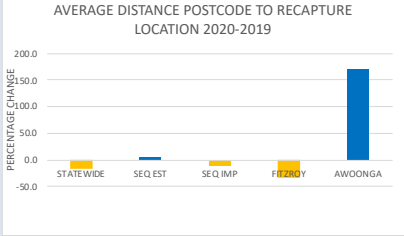
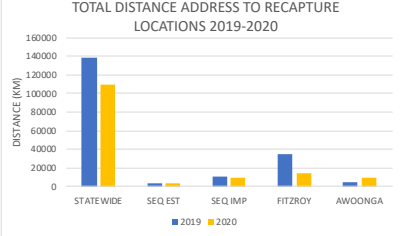
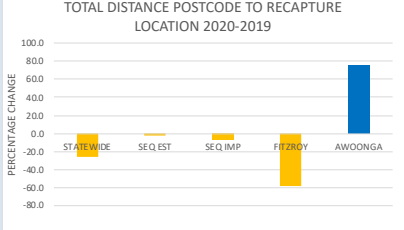
The number of recaptures is correlated to fishing effort and the number of deployed tags while behaviour is related to the distance travelled to go fishing. The actual distance travelled was unknown so the distance from the fisher's address or postcode to the recapture location was used.

In order to see if there were differences in the impact in different regions a number of areas were selected for monitoring. These were:

- Statewide
- SEQ estuaries (Sunshine Coast to Gold Coast)
- SEQ Bass impoundments (adjacent to SEQ)
- Fitzroy River (regional estuary)
- Barramundi impoundment (Lake Awoonga)

Dashboards covering these areas were compiled and distributed monthly. Initial feedback was positive, and this work was then absorbed into a broader Covid-19 project funded by the Fisheries Research and Development Corporation (FRDC) and Recfishing Research. At the end of 2020 a review was undertaken comparing 2020 with 2019. This was widely distributed to key organisation, fishing groups and individuals that would benefit from having the information. Again, the feedback was positive both in terms of the information provided and the format for presenting the data.

A summary of the comparison between 2020 and 2019 is provided and the complete dashboards were provided to Fisheries Queensland. This will continue to be monitored in 2021 as there are likely to be further impacts from Covid-19.

MEASURE	ACTUAL	GRAPH		
QUEENSLAND		COMPARISON		
Number of recaptures 2020-2019	2020	2019		
	S-wide	1453		1686
	SEQ est	185		209
	SEQ imp	164		158
	Fitzroy	141		234
	Awoonga	33		51
Recaptures percentage change 2020-2019	2020-2019			
	S-wide	-13.8		
	SEQ est	-11.5		
	SEQ imp	+3.8		
	Fitzroy	-39.7		
	Awoonga	-35.3		
Average distance (km) address or postcode to recapture location 2020-2019	2020	2019		
	S-wide	81		98
	SEQ est	21		20
	SEQ imp	64		72
	Fitzroy	103		155
	Awoonga	277		102
Average distance percentage change 2020-2019	2020-2019			
	S-wide	-17.3		
	SEQ est	+5.0		
	SEQ imp	-11.1		
	Fitzroy	-33.5		
	Awoonga	+171.6		
Total distance (km) address or postcode to recapture location 2020-2019	2020	2019		
	S-wide	109.5K		146.9K
	SEQ est	3500		3565
	SEQ imp	9.9K		10.7K
	Fitzroy	14.4K		34.5K
	Awoonga	9146		5203
Total distance percentage change 2020-2019	2020-2019			
	S-wide	-25.5		
	SEQ est	-1.8		
	SEQ imp	-7.3		
	Fitzroy	-58.5		
	Awoonga	+75.8		

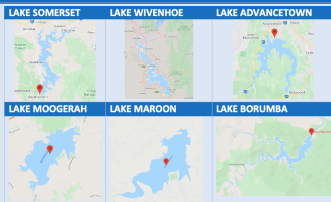

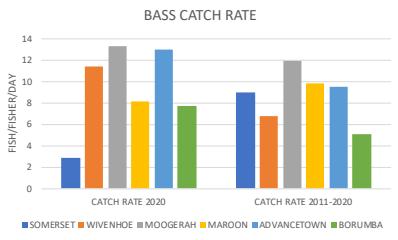
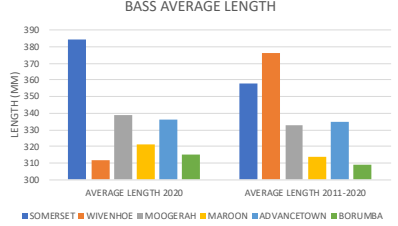
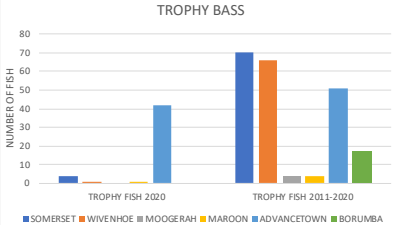
Assisting Stocking Groups

The responsibility for monitoring of stocked impoundments has shifted from Fisheries Queensland to stocking groups. Infofish Australia is working with Suntag and FFSAQ to provide basic information from tagging and other sources to assist stocking groups in better understanding their impoundments and their stocking regimes.



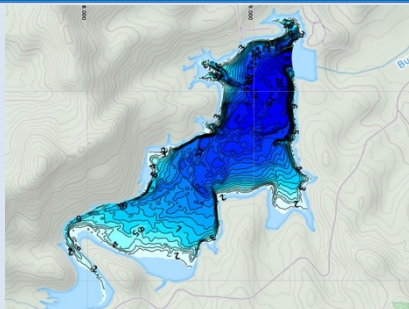

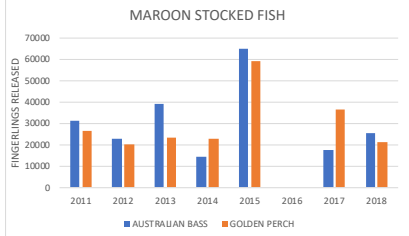
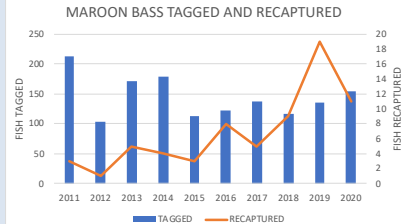
Crystal Bowl dashboards are being developed for as many impoundments as possible that have a history of tagging data. Initially this was for 6 Bass impoundments providing a 10 year timeline of tagging and recaptures, catch rates, size distribution, growth, survival, movement, tag locations and recapture postcodes (indicating where fishers are coming from). This has now been extended to include Golden Perch and other impoundments where sufficient data are available.

As with the Covid-19, a 2020 review covering impoundments with sufficient data over the past 10 years is underway and will be completed shortly. One dashboard has a summary comparing 6 Bass and Golden Perch lakes in SEQ. These are:

- Advancetown (Hinze)
- Maroon
- Moogerah
- Wivenhoe
- Somerset
- Borumba

SEQ LAKES			AUSTRALIAN BASS
			
Catch rate Fish/fisher day T20 fishers (taggers) 2020 2011-2020	HIGHEST 2020 MOOGERAH 13.9 2011-2020 MOOGERAH 12.0	LOWEST 2020 SOMERSET 2.9 2011-2020 BORUMBA 5.1	
Average length (mm) 2020 2011-2020	HIGHEST 2020 SOMERSET 384 2011-2020 WIVENHOE 376	LOWEST 2020 BORUMBA 315 2011-2020 BORUMBA 309	
Trophy fish 500+mm 2020 2011-2020	HIGHEST 2020 A/TOWN 42 2011-2020 SOMERSET 70	LOWEST 2020 MOOGERAH 0 2011-2020 MOOGERAH 4	

Dashboards are also available for each individual impoundment.

LAKE MAROON		LOCATION	BATHYMETRY																										
																													
MEASURE		ACTUAL	GRAPH																										
Surface area Lake level		Surface area 3.1km ² Level at 31 Dec 2020 49.3% For latest level https://www.seqwater.com.au/historic-dam-levels																											
Fingerlings stocked 2011-2018		<table><tr><th></th><th>HIGHEST</th><th>LOWEST</th><th>TOTAL</th></tr><tr><td>BASS</td><td></td><td></td><td></td></tr><tr><td>2015</td><td>2016</td><td></td><td></td></tr><tr><td>65.3K</td><td>0</td><td>216.7K</td></tr><tr><td>GOLDEN PERCH</td><td></td><td></td><td></td></tr><tr><td>2015</td><td>2016</td><td></td><td></td></tr><tr><td>59.2K</td><td>0</td><td>210.1K</td></tr></table>		HIGHEST	LOWEST	TOTAL	BASS				2015	2016			65.3K	0	216.7K	GOLDEN PERCH				2015	2016			59.2K	0	210.1K	
	HIGHEST	LOWEST	TOTAL																										
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GOLDEN PERCH																													
2015	2016																												
59.2K	0	210.1K																											
Bass tagged and recaptured 2011-2020		<table><tr><th></th><th>TAGGED</th><th>RECAPTURED</th></tr><tr><td>1446</td><td>68</td><td></td></tr><tr><td>RECAPTURE RATE</td><td></td><td></td></tr><tr><td>4.7%</td><td></td><td></td></tr></table>		TAGGED	RECAPTURED	1446	68		RECAPTURE RATE			4.7%																	
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Information distribution and data requests

Crystal Bowl dashboards are the primary method of providing information to fishers and interested organisations. The dashboards provide information on regions, catchments, impoundments, estuaries and species in as close to real time as possible. At this stage these dashboards are still under development and distributed regularly. They will be available online once the upgrade of the tagging database and associated websites are completed. Dashboards currently available are:

- Impact of Covid-19 on recreational fishing in Queensland
- Bass and Golden Perch in impoundments including Advancetown, Maroon, Moogerah, Wivenhoe, Somerset, Borumba, Boondooma and Cania
- Murray Cod and Golden Perch in Lake Glenlyon
- Barramundi stocked in Cairns area
- Barramundi and King Threadfin in the Fitzroy River
- Barramundi in Gladstone Harbour and Lake Awoonga
- Flathead, Bream and Javelin in the Burnett River

- Barramundi, Mangrove Jack and Rockcod in Hinchinbrook Channel

Data requests for the quarter were:

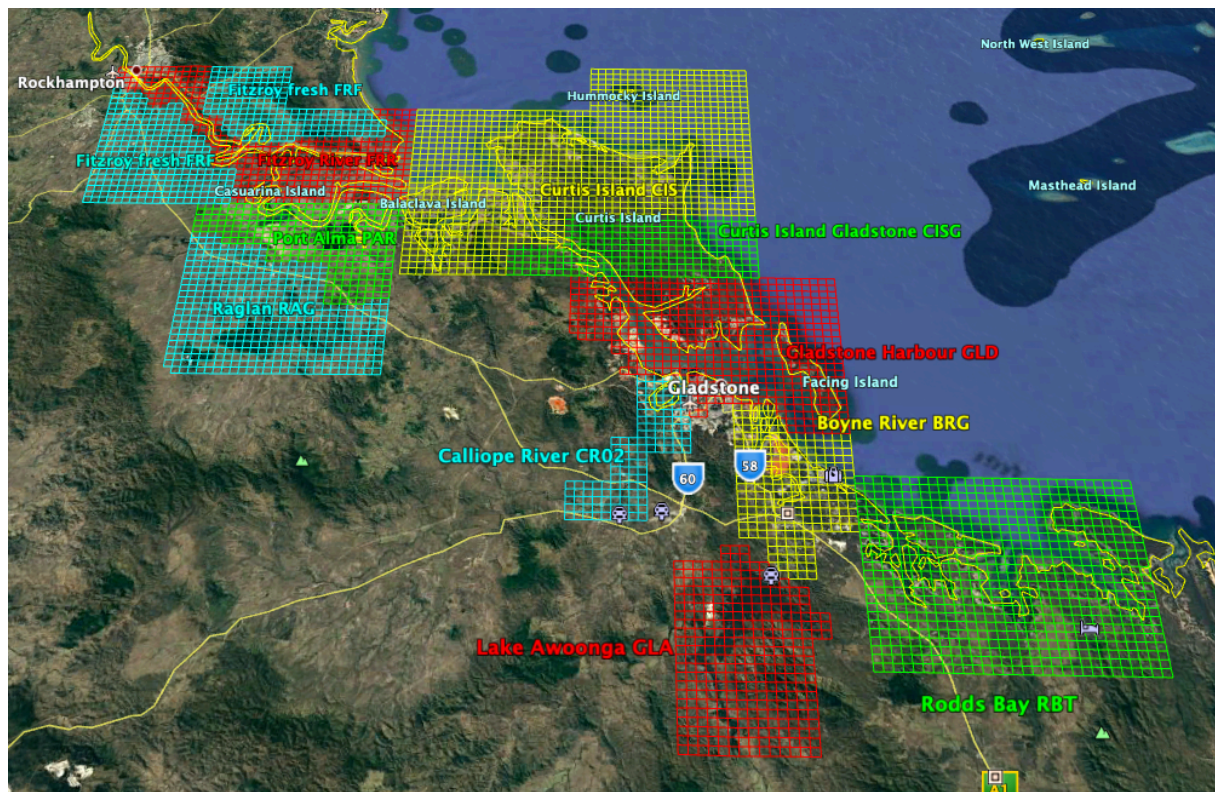
- Dealing with barotrauma in Snapper provided to Mike Cappel

Database Upgrade

The design of the new tagging database has been completed and work on various elements has commenced. Transfer of data between the old and new database will be staged to minimize the work required and to allow for any adjustments that may be required. Progress will depend on priorities and client work will take precedence.

The upgrading and updating of 311 tag grid maps were completed in Q1. These are now available as Google Earth maps for impoundments, estuaries, catchments, regional areas or in any configuration to suit taggers needs.

Grid maps available for the Rockhampton-Gladstone area. Maps are colour coded for ease of identification and clicking on a grid will provide the relevant grid code.

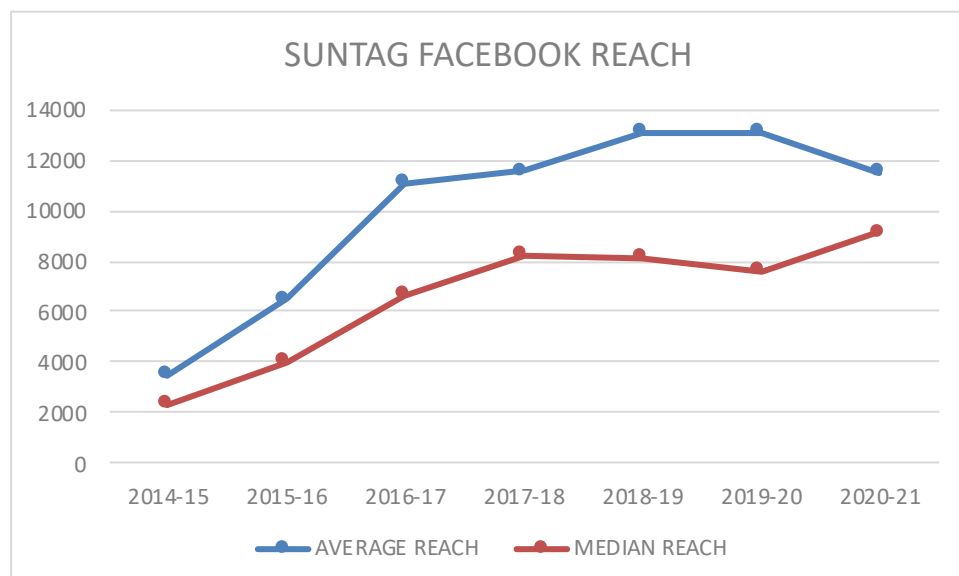
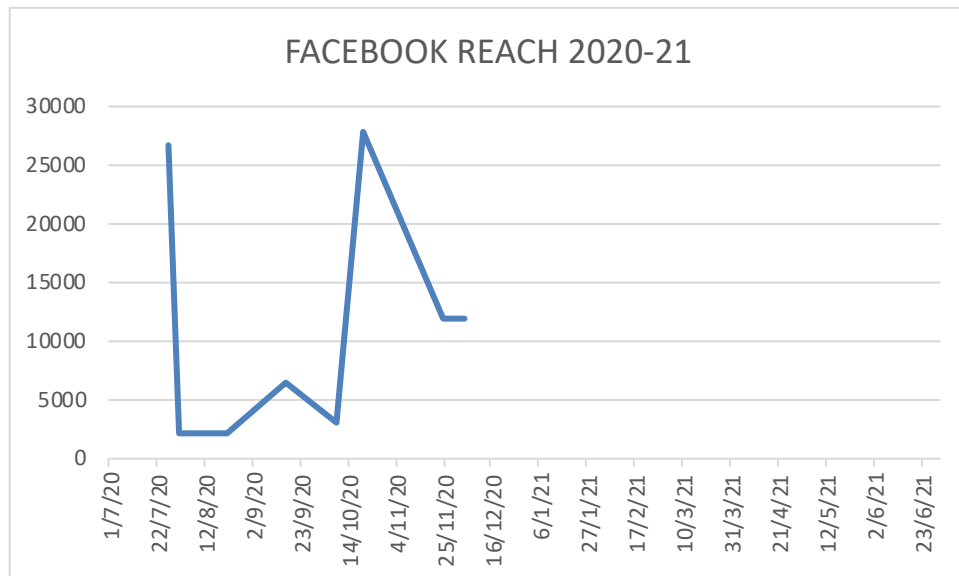


Suntag Social Media

Suntag Facebook posts fluctuate considerably depending on the subject of the post. Statistics for the current year and previous years are shown in the accompanying table.

For Q1 and Q2 this year there have been 8 Facebook posts for an average reach of 11,487 and a total reach of 89,816.

Period	Posts 2020-21	Average reach 2020-21	Average reach 2019-20	Average reach 2018-19
Q1	4	9,346	16,469	29,455
Q2	4	13,627	19,467	5,526
Q3			7,129	11,996
Q4			20,777	11,515
Year	8	11,487	12,988	13,101



The Suntag Instagram account was reactivated in Q3 in 2019-20. The posts are now complimented by my story posts and has 3,081 followers. Tracy Chelepy manages the Instagram posts and there was a 2 week period in Q2 without posts while she was on annual leave.

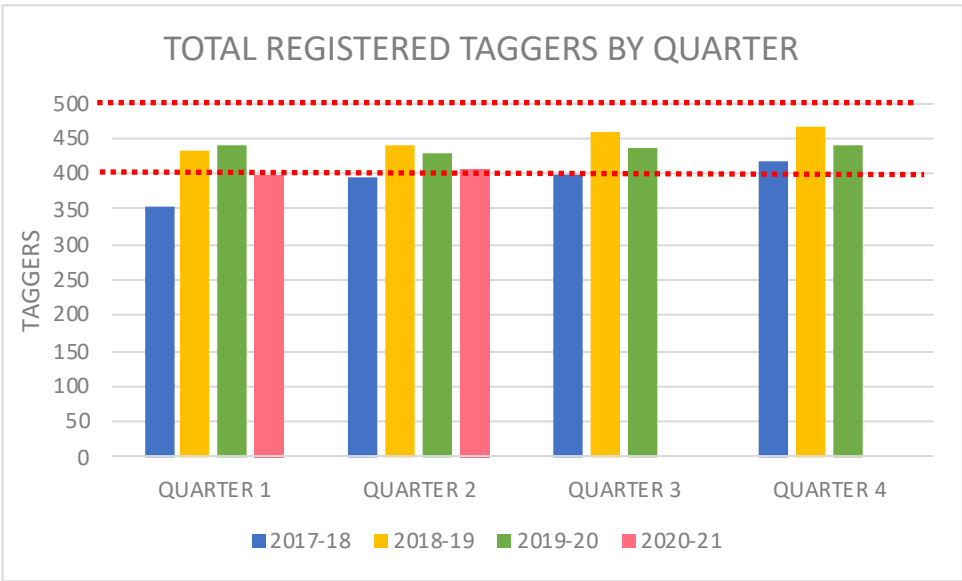
Period	Posts 2020-21	Reach	My Story Posts 2020-21	Reach
Q1	8	1,127	65	7,028
Q2	12	2,288	27	1,644
Q3				
Q4				
Year	20	3,415	92	

SUNTAG - REPORTING MILESTONE REQUIREMENT 1

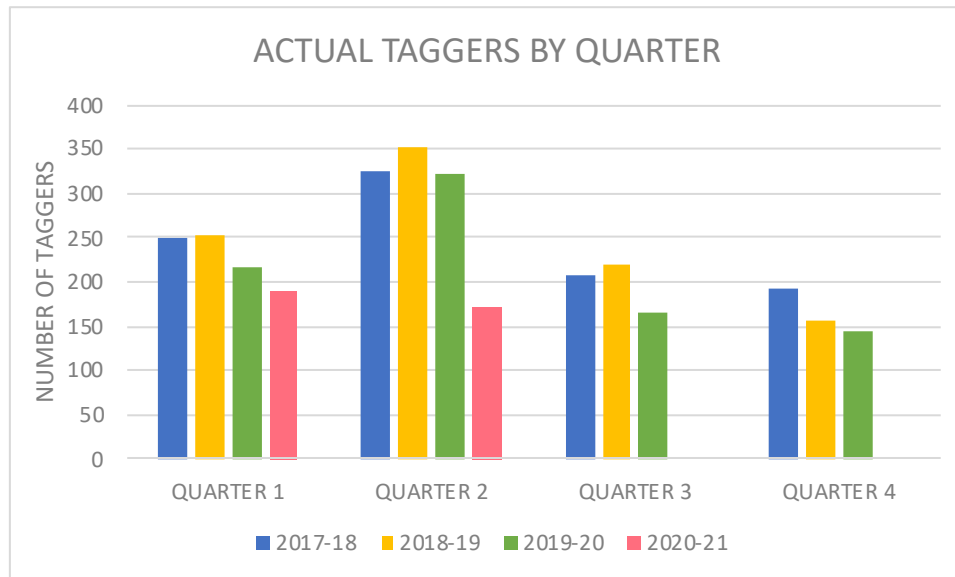
The number of registered taggers in the Queensland program

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 remain in the target range however there was an increase in members not re-registering, most likely due to the impact of Covid-19. It is expected that numbers will improve again in 2021.

Period	Registered taggers 2020-21	Registered taggers 2019-20	Registered taggers 2018-19	Registered taggers 2017-18
Q1	400	439	430	352
Q2	405	430	441	396
Q3		436	459	399
Q4		441	467	419
Year		441	467	419

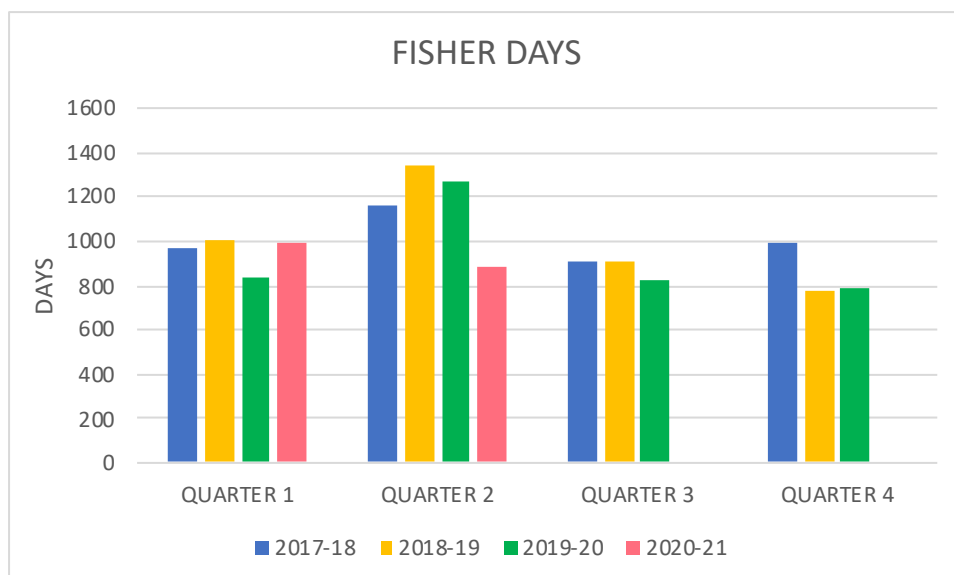


Period	Actual taggers 2020-21	Actual taggers 2019-20	Actual taggers 2018-19	Actual taggers 2017-18
Q1	190	217	244	249
Q2	170	321	330	324
Q3		166	221	207
Q4		143	156	193
Year	243	504	689	589



The number of fisher days is an important measure of tagger effort taking into account the fluctuations in actual tagger numbers. The fisher days in Q1 were similar to previous years while in Q2 were down as there was no tagging during fishing competitions as was the case in previous years.

Period	Fisher days 2020-21	Fisher days 2019-20	Fisher days 2018-19	Fisher days 2017-18
Q1	994	839	1,003	973
Q2	888	1,274	1,344	1,157
Q3		823	905	909
Q4		786	778	993
Year	1,882	3,722	4,030	4,032

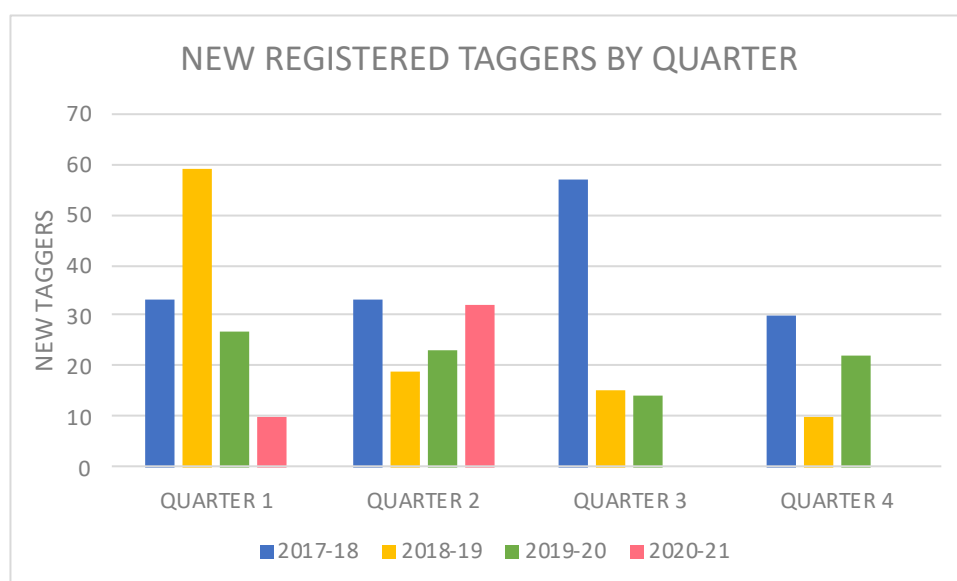


SUNTAG - REPORTING MILESTONE REQUIREMENT 2

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.

Period	New taggers 2020-21	New taggers 2019-20	New taggers 2018-19	New taggers 2017-18
Q1	10	27	59	33
Q2	32	23	19	33
Q3		14	15	57
Q4		22	10	30
Year	42	64	103	153



The following 58 clubs (some members), stocking groups, fishing businesses and others are registered with Suntag having used the services of or interacted with Suntag in 2020-2021.

- 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
- Kingaroy Sportfishing Club
- Pine Rivers Fish Management Association
- SEQ Water
- Fitzroy River Fish Stocking Association
- Mackay Area Fish Stocking Association
- Mackay Recreational Fishing Alliance
- Catchment Solutions
- Emerald Fish Stocking Association
- Gladstone Area Water Board
- Gladstone Healthy Harbour Partnership
- Gladstone Ports Corporation
- Bond University
- Fitzroy Partnership for River Health
- Rockhampton Regional Council
- Mackenzie River 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
- Cungulla Fishing Club
- Holloways Beach Environmental Education Centre
- Lively Lures
- Fishing Monthly
- 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
- Fishing Monthly magazine
- Bush and Beach magazine
- Madmics Fishing Tackle

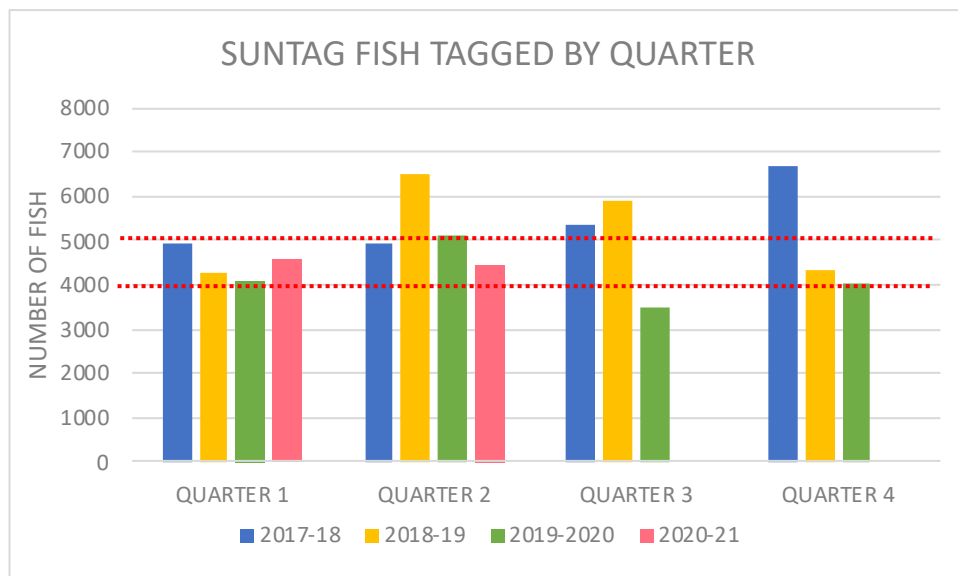
SUNTAG - REPORTING MILESTONE REQUIREMENT 3

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. While the number of actual taggers was down in Q1 and Q2 the number of tagged fish was within the target range.

Dotted lines on the graph show the target range for fish tagged each quarter. The target range is 4,000-5,000.

Period	Fish tagged 2020-21	Fish tagged 2019-20	Fish tagged 2018-19	Fish tagged 2017-18
Q1	4,578	4,075	4,292	4,928
Q2	4,424	5,092	6,529	4,950
Q3		3,464	5,892	5,366
Q4		4,051	4,314	6,672
Year	9,002	16,682	21,027	21,916



FISH TAGGED BY SPECIES

SPECIES	Q1	Q2	Q3	Q4	TOTAL
AUSTRALIAN BASS	690	1642			2332
BARRAMUNDI	817	582			1399
MANGROVE JACK	303	428			731
DUSKY FLATHEAD	446	256			702
BARRED JAVELIN	277	331			608
YELLOWFIN BREAM	331	155			486
PIKEY BREAM	199	118			317
GOLDSPOTTED ROCKCOD	160	100			260
GOLDEN SNAPPER	204	48			252
KING THREADFIN	134	62			196
GIANT TREVALLY	92	72			164
REDTHROAT EMPEROR	88	74			162
BLACKSPOTTED ROCKCOD	98	59			157
BLUE THREADFIN	99	21			120
SNAPPER	67	51			118
RED EMPEROR	56	39			95
PEARL PERCH	30	50			80
GOLDEN PERCH	28	47			75
TAILOR	67	0			67
SPECKLED JAVELIN	19	44			63
GRASS EMPEROR	16	47			63
MULLOWAY	38	10			48
QUEENFISH	29	10			39
CRIMSON SNAPPER	31	6			37
SOOTY GRUNTER	20	9			29
BARCHEEK CORAL TROUT	25	2			27
COMMON CORAL TROUT	18	7			25
BLACK JEWFISH	15	10			25
SOUTHERN SARATOGA	10	8			18
OTHER SPECIES	171	136			307
TOTAL	4578	4424	0	0	9002

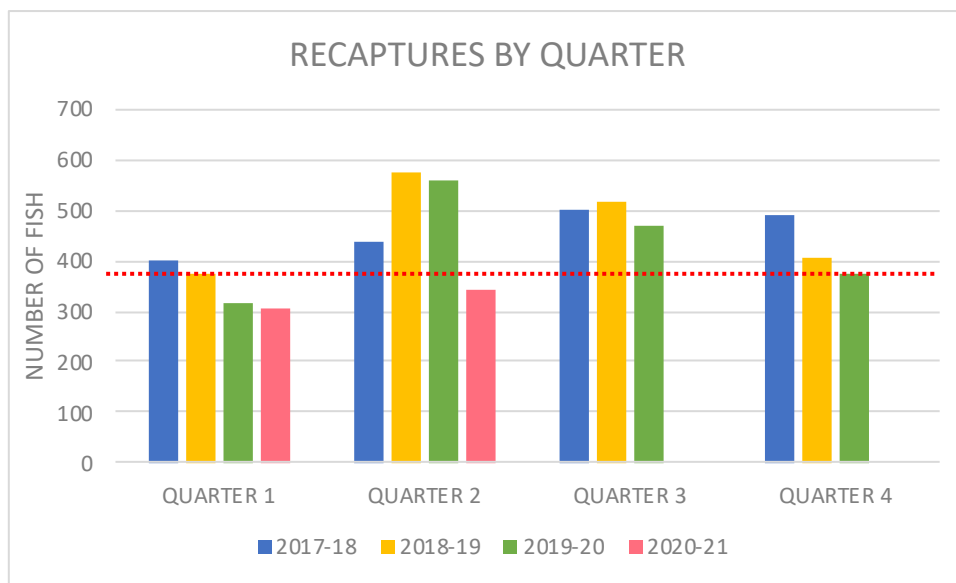
SUNTAG - REPORTING MILESTONE REQUIREMENT 4

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.

The target for recaptures for the year is 1,500 or 375 for each quarter. Dotted line on the graph shows the target number of recaptures for each quarter. Recaptures in Q2 are likely down due to Covid-19.

Period	Recaptures 2020-21	Recaptures 2019-20	Recaptures 2018-19	Recaptures 2017-18
Q1	307	314	374	398
Q2	340	560	576	435
Q3		467	518	498
Q4		375	406	492
Year	647	1,716	1,874	1,823



FISH RECAPTURED BY SPECIES

SPECIES	Q1	Q2	Q3	Q4	TOTAL
AUSTRALIAN BASS	94	104			198
BARRAMUNDI	73	87			160
DUSKY FLATHEAD	23	13			36
MANGROVE JACK	7	28			35
GOLDSPOTTED ROCKCOD	11	21			32
BARRED JAVELIN	13	12			25
BLACKSPOTTED ROCKCOD	13	12			25
KING THREADFIN	8	16			24
PIKEY BREAM	16	3			19
MURRAY COD	6	4			10
RED EMPEROR	7	2			9
GOLDEN PERCH	5	4			9
SOUTHERN SARATOGA	4	5			9
YELLOWFIN BREAM	6	1			7
GIANT REVALLY	1	6			7
BLUE THREADFIN	4	1			5
CRIMSON SNAPPER	3	2			5
BARCHEEK CORAL TROUT	3	1			4
GOLDEN SNAPPER	1	3			4
PEARL PERCH	2	1			3
OTHER SPECIES	7	14			21
TOTAL	307	340	0	0	647