



GOFISH-22 REVIEW 2019-2022

Trends in recreational fisher activity

Fishing activity by fishers recapturing tagged fish is being used as an indicative sample of the fisher population based on the relatively random mixing of tagged fish with the untagged population to get a sense of the impact of COVID-19, weather events and other external influences on fisher activity in recreational fishing in Queensland. Activity by taggers is also used to provide a comparison in some parameters to determine differences between the 2 groups.

As the impact of Covid-19 on recreational fishing has diminished other factors such as flooding, droughts, climate, cost of fuel and technology change are likely to play a greater role in influencing fisher activity. This element of Crystal Bowl will continue to evolve to provide insights into trends in recreational fisher activity. This is one of the few opportunities to get real time information at a low cost that can influence decision making by those that interact with our fisheries resources.

There are 4 aspects of activity that are being monitored:

- Fisher effort - a change in the number of recaptures is likely a reflection of fishing effort as recaptures are correlated to fishing effort.
- Fisher travel – a change in the distance travelled to go fishing reflects fisher activity and that is measured by the distance from where the fisher lives to the recapture location as a proxy for travel distance.
- Fisher days – what day of the week and month of the year when fishing occurs is a measure of fisher activity influenced by a range of factors and is a measure of opportunity.
- Fisher gender – the proportion of male and female in the fishing population is a demographic measure that provides an insight into gender participation.

MONITORING LOCATIONS

Statewide (All of Queensland)
South East Queensland estuaries (Sunshine Coast - Gold Coast)
South East Queensland Impoundments (6 Bass impoundments)
Central Queensland impoundment (Lake Cania Bass)
Central Queensland estuaries (Fitzroy River – Curtis Island)
Central Queensland impoundment (Lake Awoonga Barramundi)
Hinchinbrook estuaries (Lucinda-Mission Beach)




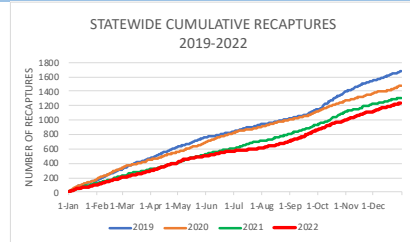
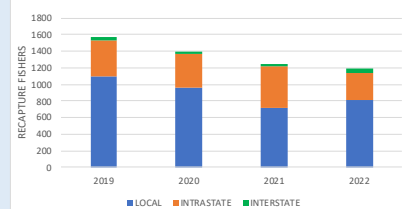
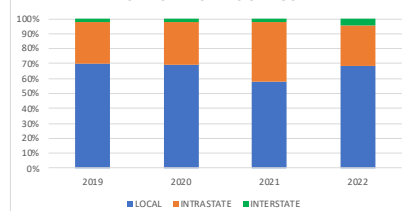
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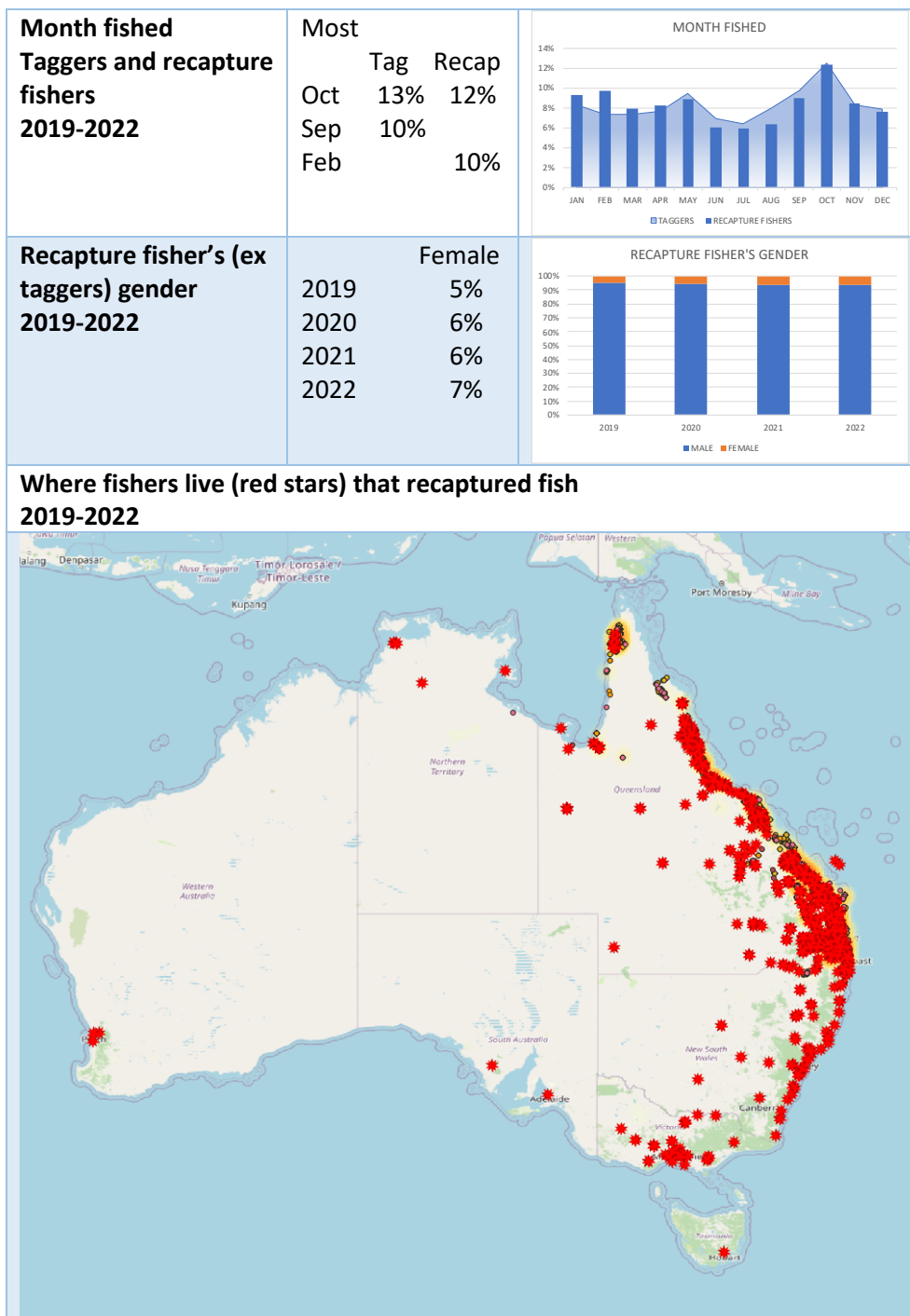
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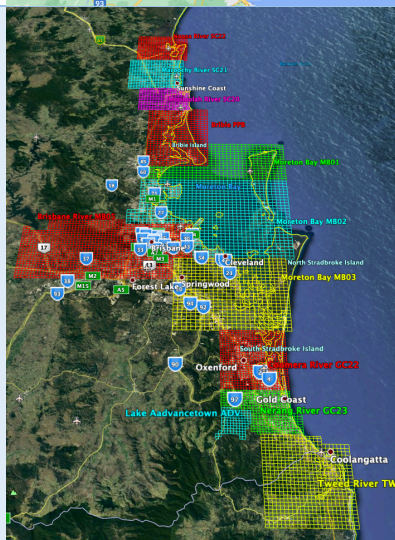
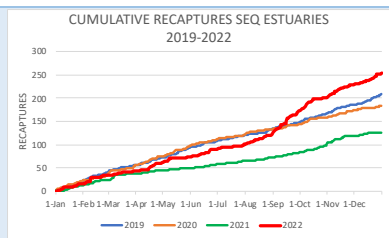
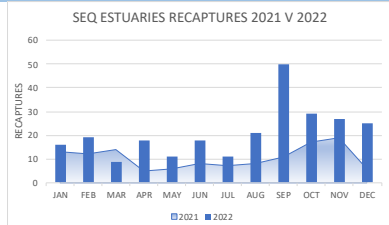
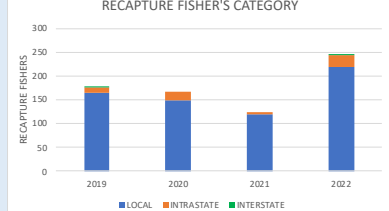


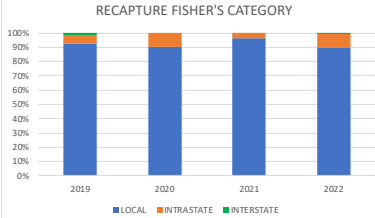
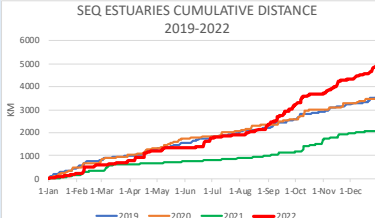
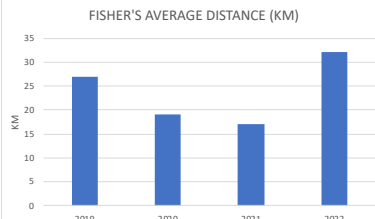
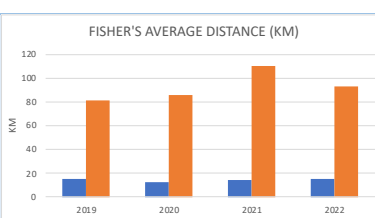
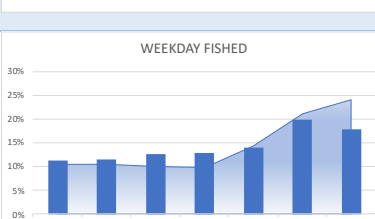

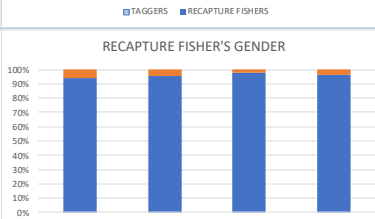
Initial funding by Fisheries
Research and Development
Corporation and Recfishing
Research

MEASURE	ACTUAL	GRAPH														
QUEENSLAND		STATEWIDE PERSPECTIVE														
All of Queensland																
Key observations	<p>Flooding in many areas had a significant impact on fishing this year. The flooding disrupted activity, particularly in Bass impoundments where fishing conditions were poor from Mar-Sep. Spilling of Bass dams saw significant numbers of fish leaving the lakes. This saw a shift in activity from impoundments to the rivers below the dams.</p> <p>Flooding also affected fishing in southern estuaries and in the Fitzroy River in particular where fishing conditions remained poor for much of the year. However Bass that spilled from the lakes boosted fishing in SEQ estuaries once the conditions settled down.</p> <p>Covid reduced numbers of interstate visiting fishers however there has been a rebound with more visitors recapturing fish than before Covid.</p>															
Cumulative recaptures 2019-2022	<table><thead><tr><th></th><th>Recaptures</th></tr></thead><tbody><tr><td>2019</td><td>1685</td></tr><tr><td>2020</td><td>1475</td></tr><tr><td>2021</td><td>1305</td></tr><tr><td>2022</td><td>1240</td></tr><tr><td>22-21</td><td>-5%</td></tr><tr><td>22-19</td><td>-26%</td></tr></tbody></table>		Recaptures	2019	1685	2020	1475	2021	1305	2022	1240	22-21	-5%	22-19	-26%	
	Recaptures															
2019	1685															
2020	1475															
2021	1305															
2022	1240															
22-21	-5%															
22-19	-26%															
Recapture fisher's category Local Intrastate Interstate 2019-2022	<table><tbody><tr><td>2019</td><td>1099</td></tr><tr><td>2020</td><td>964</td></tr><tr><td>2021</td><td>724</td></tr><tr><td>2022</td><td>813</td></tr></tbody></table>	2019	1099	2020	964	2021	724	2022	813							
2019	1099															
2020	964															
2021	724															
2022	813															
Recapture fisher's category Local Intrastate Interstate 2019-2022	<table><tbody><tr><td>2019</td><td>70%</td></tr><tr><td>2020</td><td>69%</td></tr><tr><td>2021</td><td>58%</td></tr><tr><td>2022</td><td>68%</td></tr></tbody></table>	2019	70%	2020	69%	2021	58%	2022	68%							
2019	70%															
2020	69%															
2021	58%															
2022	68%															

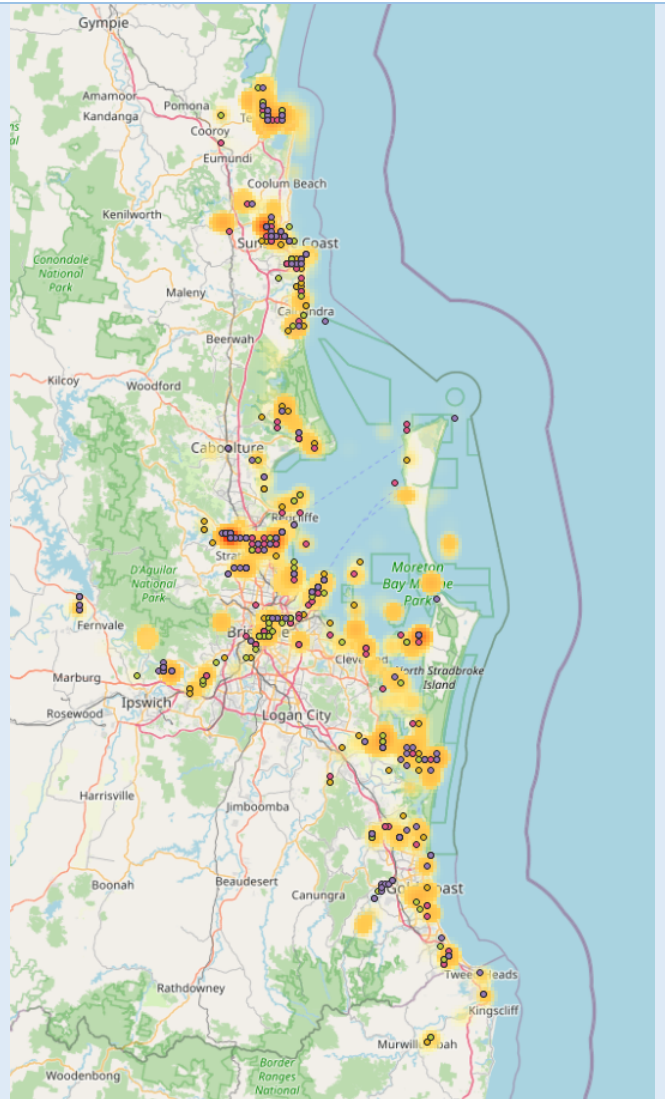
Interstate fishers 2019-2022	Fishers		
	2019	39	
	2020	26	
	2021	26	
	2022	50	
Interstate fisher's origin 2019-2022	State		
	NSW	62%	
	VIC	27%	
	NT	4%	
	SA	2%	
	WA	2%	
	TAS	1%	
	OS	1%	
Cumulative distance where fishers live to recapture location (travel proxy) 2019-2022	Distance (km)		
	2019	147526	
	2020	110798	
	2021	163514	
	2022	159369	
	22-21	-3%	
	22-19	+8%	
Average distance where fishers live to recapture location (travel proxy) 2019-2022	Distance (km)		
	2019	88	
	2020	79	
	2021	126	
	2022	130	
Average distance where fishers live to recapture location (travel proxy) Local (L) Intrastate (QLD) 2019-2022	Av distance (km)		
	2019	L	QLD
		16	194
	2020	L	QLD
		16	188
	2021	L	QLD
		17	234
Average distance where fishers live to recapture location (travel proxy) Interstate 2019-2022	Av distance (km)		
	2019	393	
	2020	310	
	2021	507	
	2022	982	
Weekday fished Taggers and recapture fishers 2019-2022	Most Tag Recap		
	Sat	21% 20%	
	Sun	20% 20%	



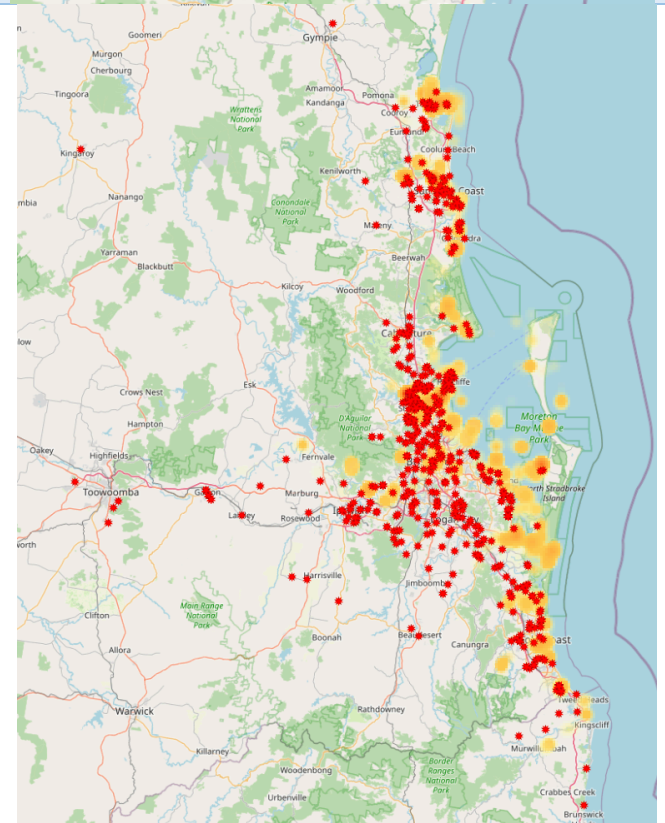
MEASURE	ACTUAL	GRAPH														
SOUTH EAST QLD	ESTUARIES	REGIONAL PERSPECTIVE														
South East Queensland estuaries	Sunshine Coast Brisbane Gold Coast															
SEQ estuaries grid maps	Noosa River SC22 Maroochy River SC21 Mooloolah River SC20 Bribie PPB Moreton Bay MB01,MB02,MB03 Brisbane River MB05 Coomera River GC22 Nerang River GC23 Tweed River TWR															
Key observations	Following flooding this year Bass spilled from most impoundments and there was a shift in activity to fishing below dams which intensified towards the end of the year. This saw a significant boost in recaptures in SEQ rivers and estuaries.															
Cumulative recaptures 2019-2022	<table><tr><th colspan="2">Recaptures</th></tr><tr><td>2019</td><td>209</td></tr><tr><td>2020</td><td>184</td></tr><tr><td>2021</td><td>126</td></tr><tr><td>2022</td><td>254</td></tr><tr><td>22-21</td><td>+102%</td></tr><tr><td>22-19</td><td>+22%</td></tr></table>	Recaptures		2019	209	2020	184	2021	126	2022	254	22-21	+102%	22-19	+22%	
Recaptures																
2019	209															
2020	184															
2021	126															
2022	254															
22-21	+102%															
22-19	+22%															
Monthly recaptures 2021-2022	<table><tr><th></th><th>Most</th></tr><tr><td></td><td>2021</td></tr><tr><td>Nov</td><td>19</td></tr><tr><td></td><td>2022</td></tr><tr><td>Sep</td><td>50</td></tr></table>		Most		2021	Nov	19		2022	Sep	50					
	Most															
	2021															
Nov	19															
	2022															
Sep	50															
Recapture fisher's category	<table><tr><th></th><th>Local</th></tr><tr><td>2019</td><td>165</td></tr><tr><td>2020</td><td>150</td></tr><tr><td>2021</td><td>119</td></tr><tr><td>2022</td><td>220</td></tr></table>		Local	2019	165	2020	150	2021	119	2022	220					
	Local															
2019	165															
2020	150															
2021	119															
2022	220															

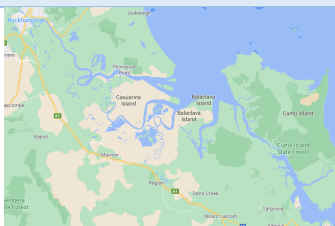
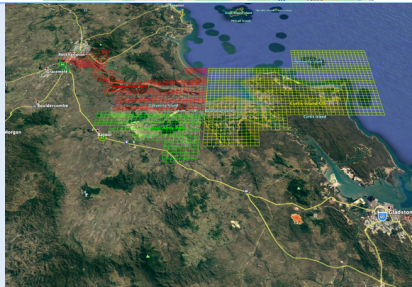
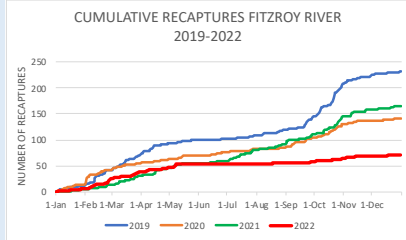
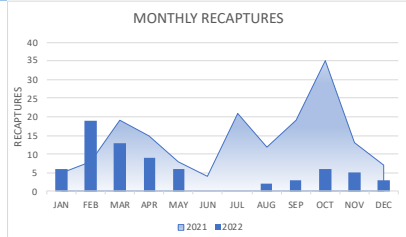
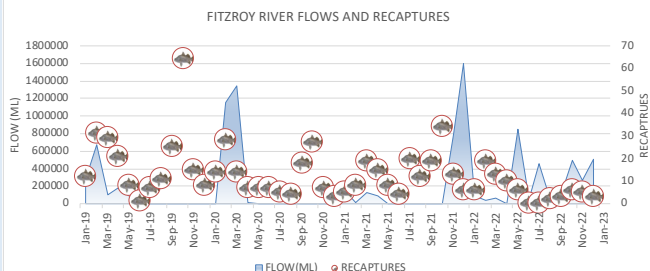
Recapture fisher's category Local Intrastate Interstate 2019-2022	2019	Local		93%			
	2020	Local		90%			
	2021	Local		96%			
	2022	Local		90%			
	2022	Local		90%			
Cumulative distance where fishers live to recapture location (travel proxy) 2019-2022	Distance (km)			2019	3565		
	Distance (km)			2020	3501		
	Distance (km)			2021	2056		
	Distance (km)			2022	4917		
	Distance (km)			22-21	+139%		
	Distance (km)			22-21	+139%		
Average distance where fishers live to recapture location (travel proxy) 2019-2022	Distance (km)			2019	27		
	Distance (km)			2020	19		
	Distance (km)			2021	17		
	Distance (km)			2022	32		
	Distance (km)			2022	32		
Average distance where fishers live to recapture location (travel proxy) Local (L) Intrastate (QLD) 2019-2022	Av distance (km)			2019	L	15	
	Av distance (km)				QLD	81	
	Av distance (km)				L	13	
	Av distance (km)				QLD	86	
	Av distance (km)				L	14	
	Av distance (km)				QLD	93	
Weekday fished Taggers and recapture fishers 2019-2022	Most			Sat	Tag	21%	
	Tag				Recap	20%	
	Sun	24%	18%				
	Sun				24%	18%	
Month fished Taggers and recapture fishers 2019-2022	Most			Oct	Tag	10%	
	Tag				Recap	11%	
	Aug	10%					
	Nov					11%	
	Nov					11%	
Recapture fisher's (ex taggers) gender 2019-2022	Female			2019	Male	94%	
	Female				Female	6%	
	Female				Male	96%	
	Female				Female	4%	
	Female				Male	96%	

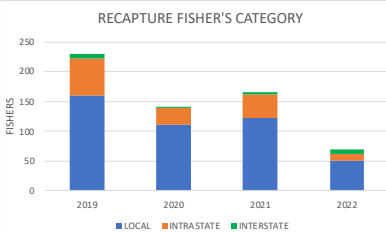
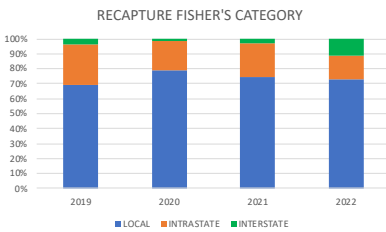
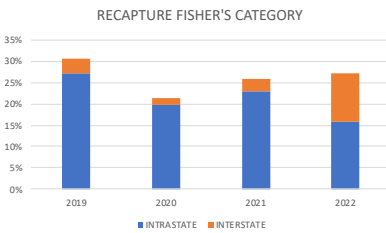
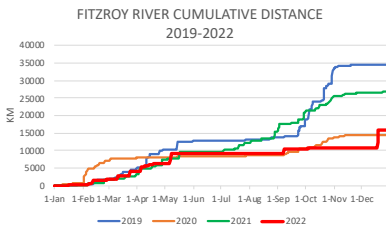
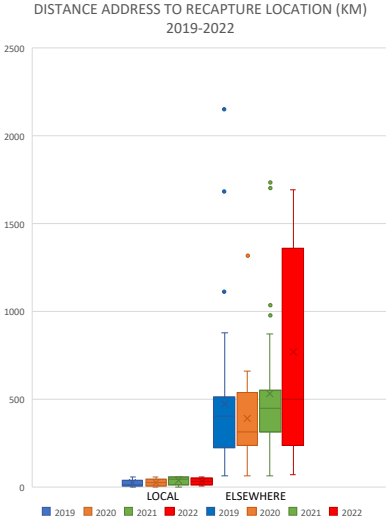
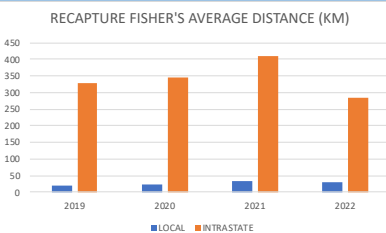
Fisher activity
**Fish tagged (red-
orange heat map) and
recaptured (dots)**
2019-2022

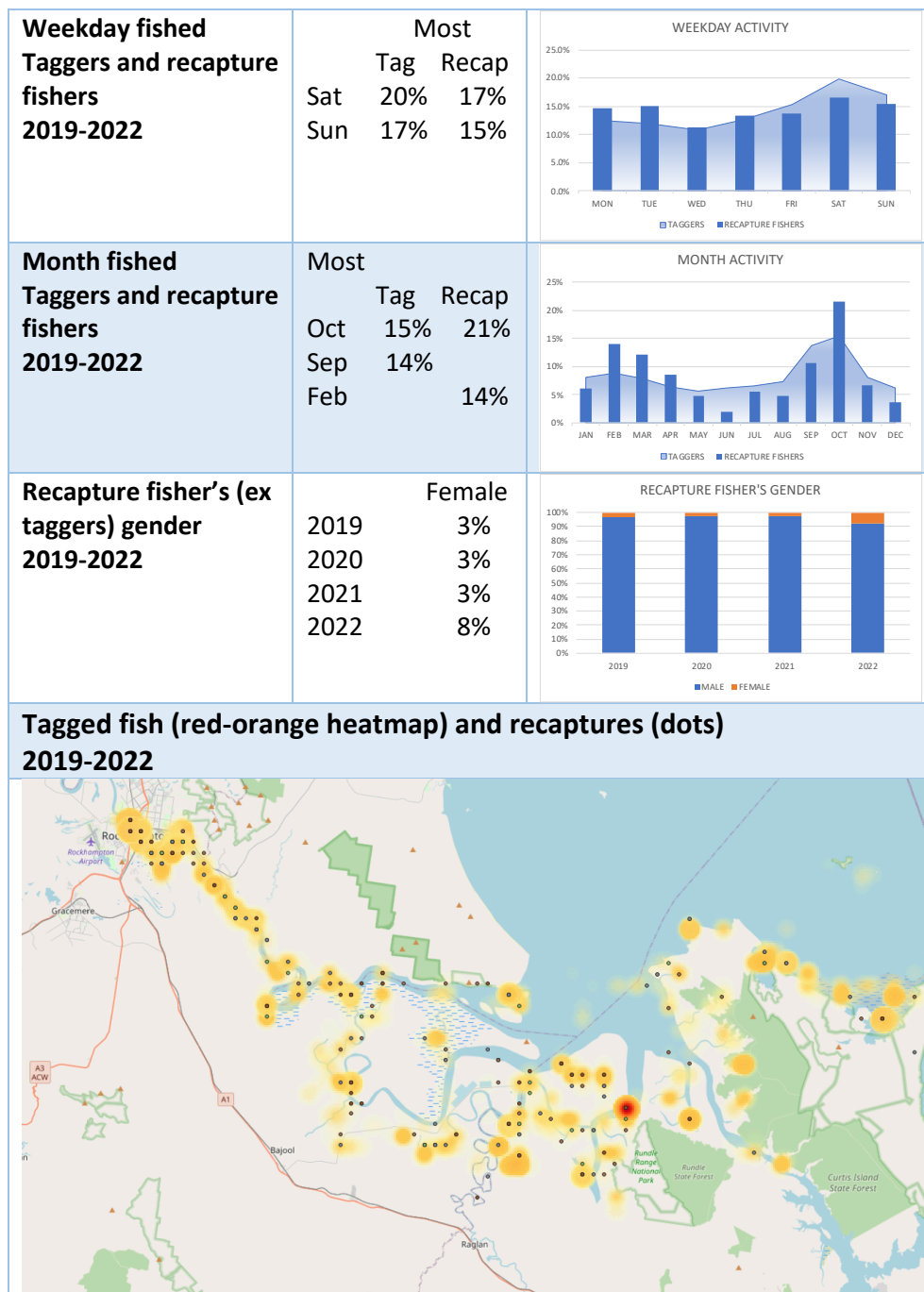


Fisher activity
**Fish tagged (red-
orange heatmap) and
where recapture
fishers live (red stars)**

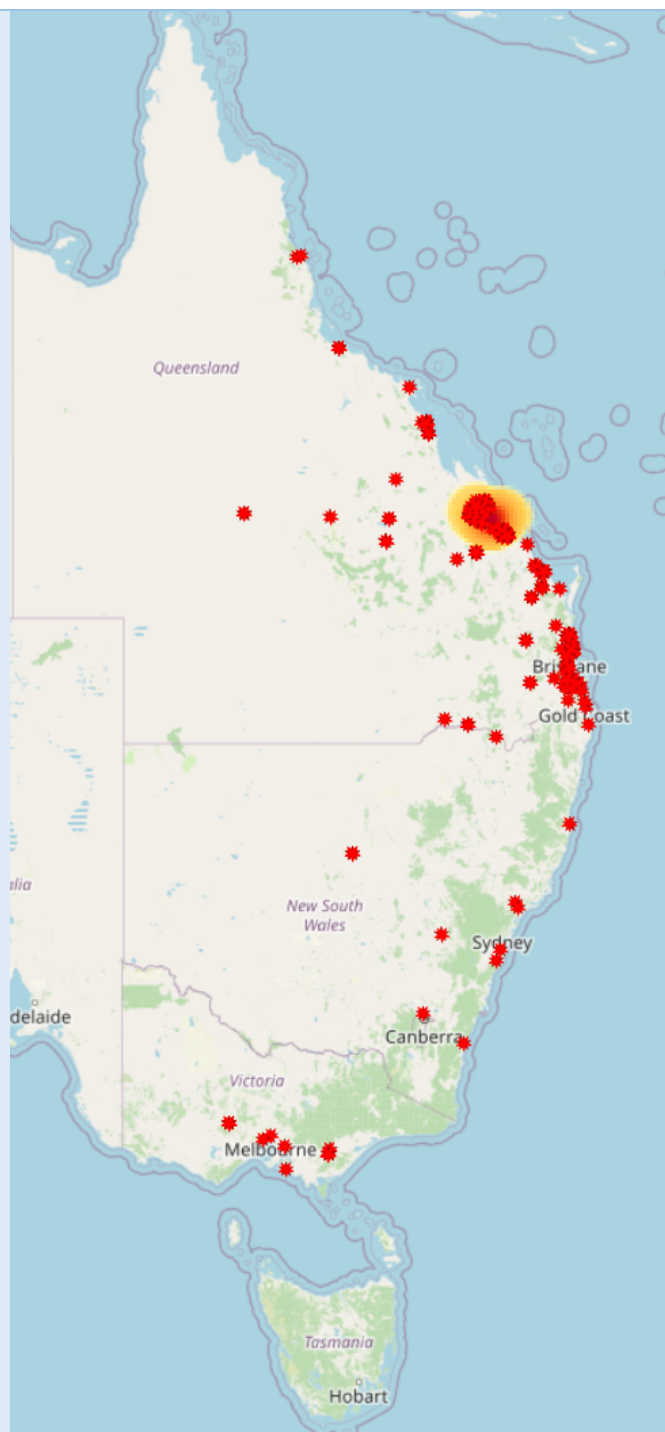


MEASURE	ACTUAL	GRAPH														
FITZROY RIVER	ESTUARY	REGIONAL PERSPECTIVE														
Fitzroy River and tidal delta Rockhampton to Curtis Island	Fitzroy River Casuarina Creek Raglan Creek Inkerman Creek Connor Creek Yellow Patch															
Fitzroy River grid maps	Fitzroy River FRR Port Alma PAR Curtis Island CIS															
Key observations	<p>Fishing in the Fitzroy this year was severely impacted by almost continual river flow keeping the river fresh and very dirty with floating debris making for very difficult fishing conditions.</p> <p>Tagging effort shifted outside the river to adjacent creeks on the Capricorn coast and to creeks to the south where there was strong recruitment of Barramundi with large numbers being tagged.</p>															
Cumulative recaptures 2019-2022	<table><tr><th colspan="2">Recaptures</th></tr><tr><td>2019</td><td>232</td></tr><tr><td>2020</td><td>141</td></tr><tr><td>2021</td><td>166</td></tr><tr><td>2022</td><td>72</td></tr><tr><td>22-21</td><td>-57%</td></tr><tr><td>22-19</td><td>-69%</td></tr></table>	Recaptures		2019	232	2020	141	2021	166	2022	72	22-21	-57%	22-19	-69%	
Recaptures																
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Monthly recaptures 2021-2022	<table><tr><th colspan="2">Most</th></tr><tr><td></td><td>2021</td></tr><tr><td>Oct</td><td>35</td></tr><tr><td></td><td>2022</td></tr><tr><td>Feb</td><td>19</td></tr></table>	Most			2021	Oct	35		2022	Feb	19					
Most																
	2021															
Oct	35															
	2022															
Feb	19															
Recaptures and river flows 2019-2022																

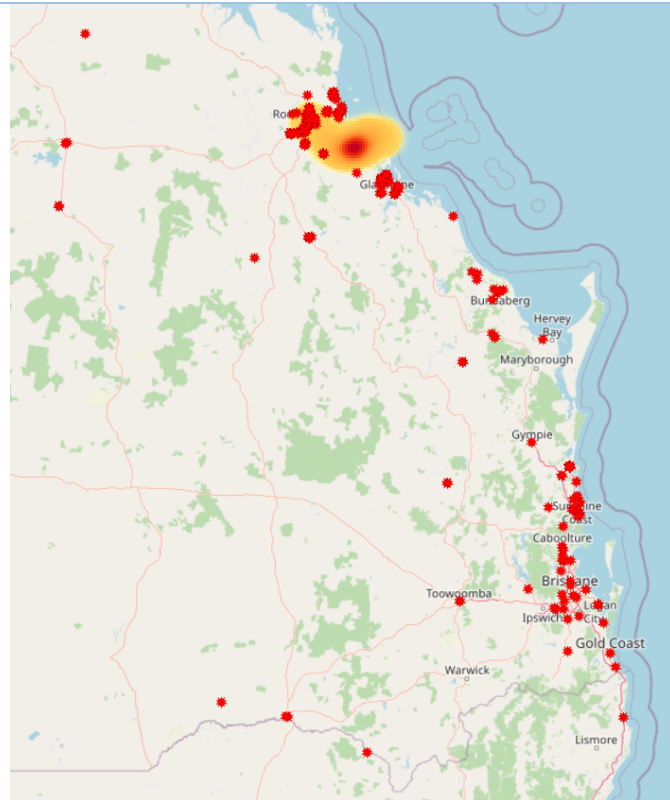
Recapture fisher's category Local Intrastate Interstate 2019-2022	2019	Local		
	2020	159		
	2021	111		
	2022	123		
	2022	51		
Recapture fisher's category Local Intrastate Interstate 2019-2022	2019	Local		
	2020	69%		
	2021	79%		
	2022	74%		
	2022	73%		
Intrastate fishers (Qld) Interstate fishers (Oth) 2019-2022	2019	Qld	Oth	
	2020	27%	3%	
	2021	20%	1%	
	2022	23%	3%	
	2022	16%	11%	
Cumulative distance where fishers live to recapture location (travel proxy) 2019-2022	Distance (km)			
	2019	34620		
	2020	14379		
	2021	26844		
	2022	15903		
	22-21	-41%		
Distance (km) address or postcode to recapture location 2019-2022				
Average distance where fishers live to recapture location (travel proxy) Local (L) Intrastate (QLD) 2019-2022	Av distance (km)			
		L	QLD	
	2019	21	330	
	2020	25	344	
	2021	33	408	
	2022	30	285	
	2022	30	285	



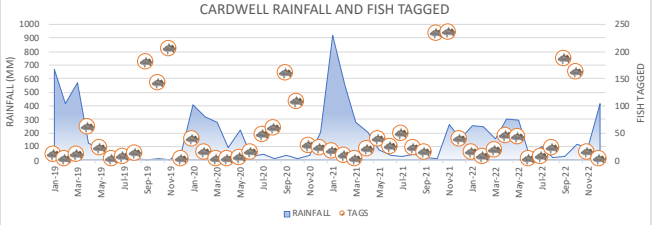
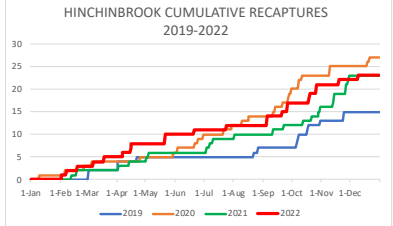
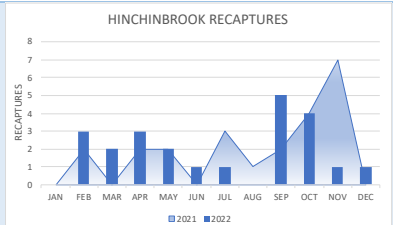
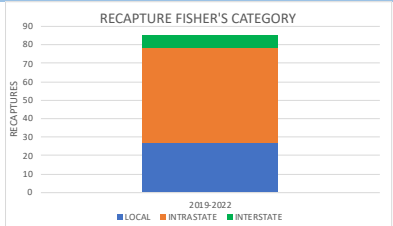


**Where fishers live
that recaptured fish
Tagged (red-orange
heat map)
Recapture fishers
addresses (red stars)
2019-2022**



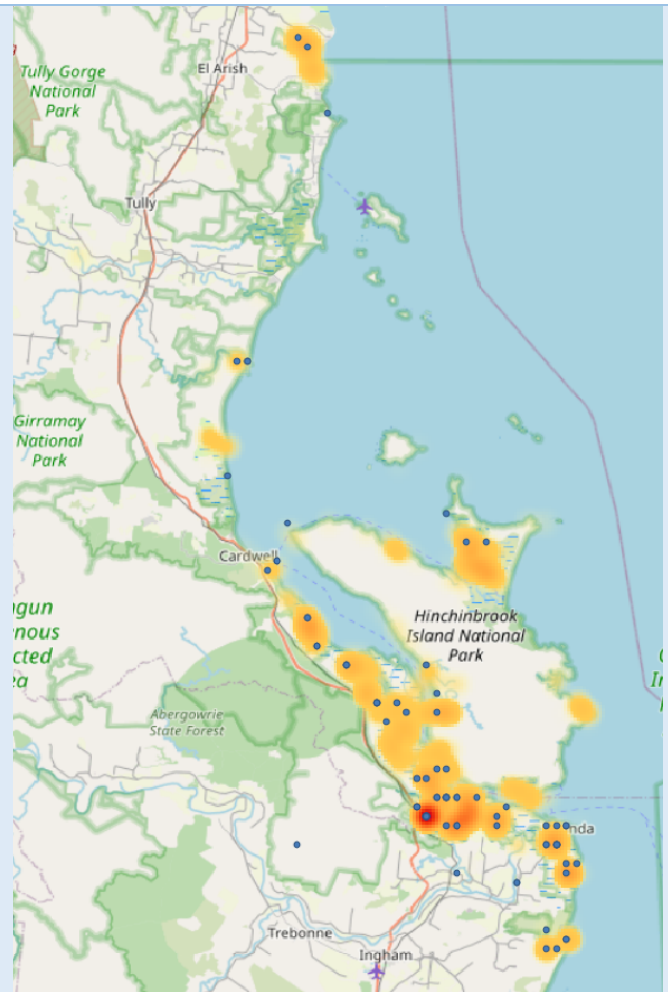
**Where fishers live
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2019-2022**



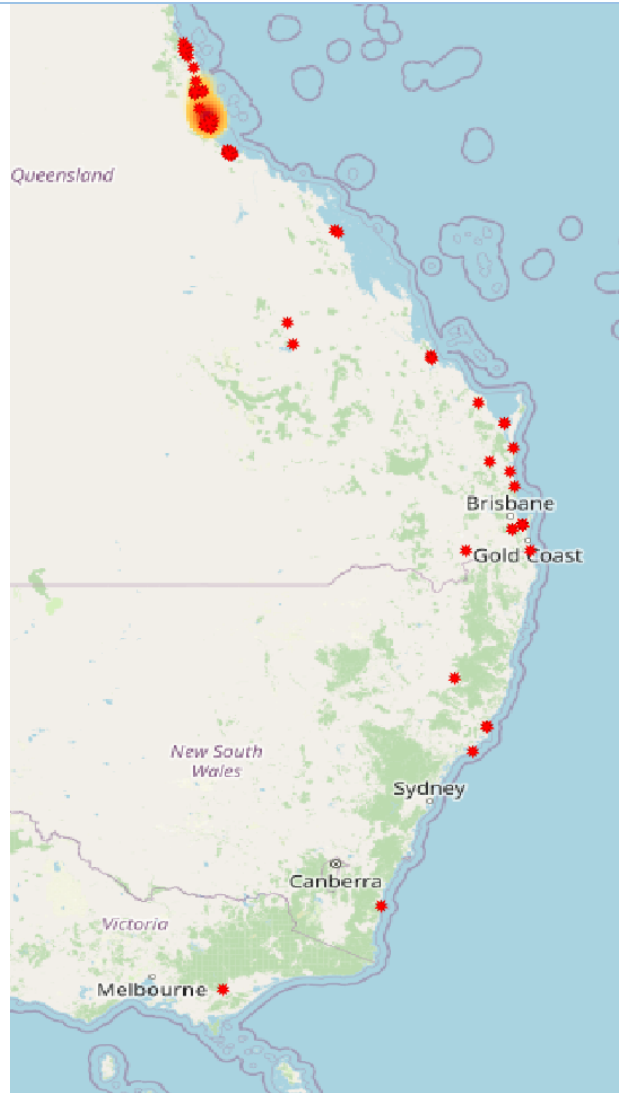
MEASURE	ACTUAL	GRAPH
HINCHINBROOK	ESTUARIES	REGIONAL PERSPECTIVE
Hinchinbrook estuaries	Hinchinbrook Channel creeks Lucinda-Cardwell Murray River Tully River Mission Beach creeks	
Hinchinbrook grid maps	Grid maps Ingham IGH Hinchinbrook Channel HCC Hinchinbrook Island HIC Murray River KR01 Tully TLL Mission Beach MBT	
Key observations	Hinchinbrook tagging and recaptures are strongly influenced by the wet season from Dec-Mar when fishing is mostly undertaken by locals. From winter to Nov there is an influx of fishers from SEQ and interstate. While the numbers of fish tagged and recaptured each year are low there is a pattern that is repeated each year.	
Cardwell rainfall and fish tagged 2019-2022		
Cumulative recaptures 2019-2022	Recaptures 2019 15 2020 27 2021 23 2022 23 22-21 0% 22-19 +53%	
Recaptures by month 2021-2022	Most 2021 Nov 7 2022 Sep 5	
Cumulative recaptures 2019-2022	Category Local 27 Intrastate 51 Interstate 7	

Cumulative recaptures Local Intrastate Interstate 2019-2022	<table><tr><th colspan="2">Category</th></tr><tr><td>Local</td><td>32%</td></tr><tr><td>Intrastate</td><td>60%</td></tr><tr><td>Interstate</td><td>8%</td></tr></table>	Category		Local	32%	Intrastate	60%	Interstate	8%	<p>RECAPTURE FISHER'S CATEGORY</p> <p>2019-2022</p> <p>■ LOCAL ■ INTRASTATE ■ INTERSTATE</p>		
Category												
Local	32%											
Intrastate	60%											
Interstate	8%											
Cumulative distance (km) where recapture fishers live to recapture location 2019-2022	<table><tr><th colspan="2">Distance (km)</th></tr><tr><td>2019</td><td>7464</td></tr><tr><td>2020</td><td>9813</td></tr><tr><td>2021</td><td>13648</td></tr><tr><td>2022</td><td>11673</td></tr></table>	Distance (km)		2019	7464	2020	9813	2021	13648	2022	11673	<p>HINCHINBROOK CUMULATIVE DISTANCE 2019-2022</p> <p>2019 2020 2021 2022</p>
Distance (km)												
2019	7464											
2020	9813											
2021	13648											
2022	11673											
Average distance (km) where recapture fishers live to recapture location 2019-2022	<table><tr><th colspan="2">Av distance (km)</th></tr><tr><td>Local</td><td>21</td></tr><tr><td>Intrastate</td><td>588</td></tr><tr><td>Interstate</td><td>1710</td></tr></table>	Av distance (km)		Local	21	Intrastate	588	Interstate	1710	<p>RECAPTURE FISHER'S AVERAGE DISTANCE (KM)</p> <p>LOCAL INTRASTATE INTERSTATE</p>		
Av distance (km)												
Local	21											
Intrastate	588											
Interstate	1710											
Weekday fished Taggers and recapture fishers 2019-2022	<table><tr><th colspan="2">Most</th></tr><tr><th>Tag</th><th>Recap</th></tr><tr><td>Sat 21%</td><td>20%</td></tr><tr><td>Sun 16%</td><td></td></tr><tr><td>Mon</td><td>19%</td></tr></table>	Most		Tag	Recap	Sat 21%	20%	Sun 16%		Mon	19%	<p>WEEKDAY ACTIVITY</p> <p>MON TUE WED THU FRI SAT SUN</p> <p>■ TAGGERS ■ RECAPTURE FISHERS</p>
Most												
Tag	Recap											
Sat 21%	20%											
Sun 16%												
Mon	19%											
Month fished Taggers and recapture fishers 2019-2022	<table><tr><th colspan="2">Most</th></tr><tr><th>Tag</th><th>Recap</th></tr><tr><td>Sep 24%</td><td>15%</td></tr><tr><td>Oct 23%</td><td>19%</td></tr></table>	Most		Tag	Recap	Sep 24%	15%	Oct 23%	19%	<p>MONTHLY ACTIVITY</p> <p>JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC</p> <p>■ TAGGERS ■ RECAPTURE FISHERS</p>		
Most												
Tag	Recap											
Sep 24%	15%											
Oct 23%	19%											
Recapture fisher's (ex taggers) gender 2019-2022	<table><tr><th colspan="2">2019-2022</th></tr><tr><td>Female</td><td>11%</td></tr><tr><td>Male</td><td>89%</td></tr></table>	2019-2022		Female	11%	Male	89%	<p>RECAPTURE FISHER'S GENDER</p> <p>2019-2022</p> <p>■ MALE ■ FEMALE</p>				
2019-2022												
Female	11%											
Male	89%											

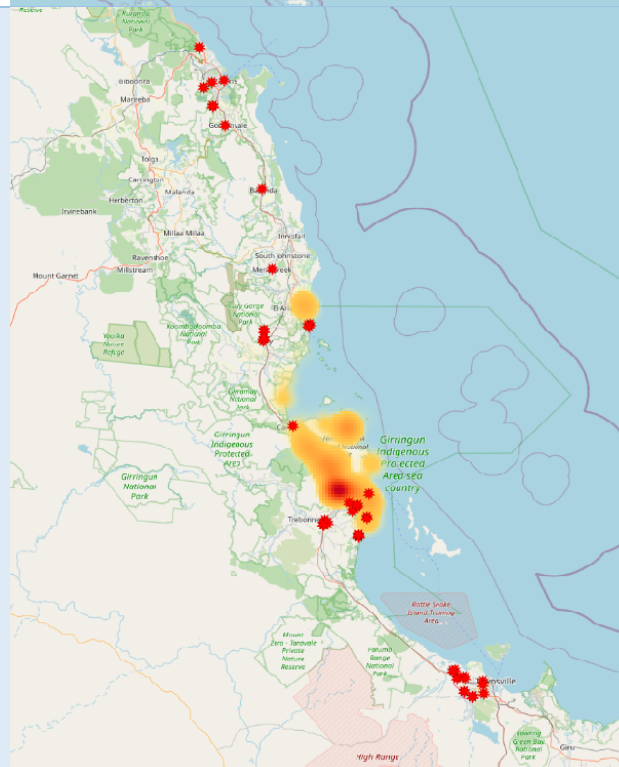
Tagged fish (red-orange heatmap) and recaptures (dots) 2019-2022



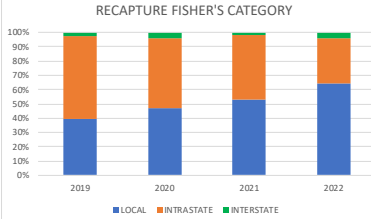
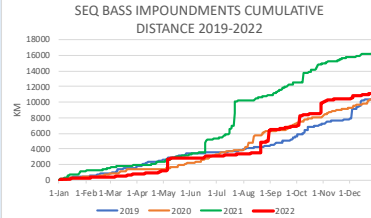
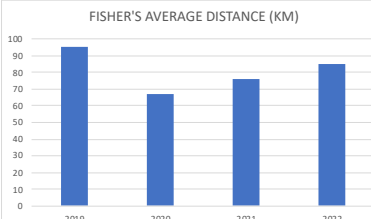
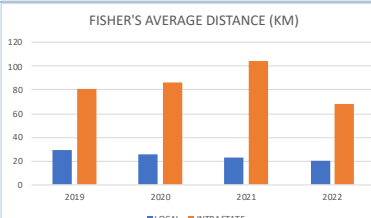
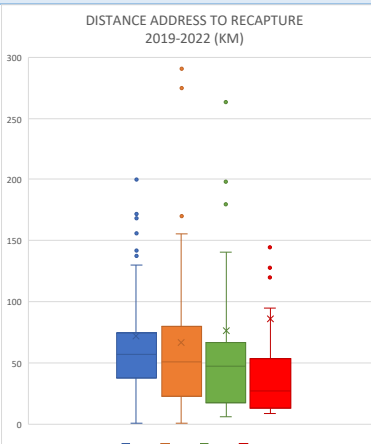
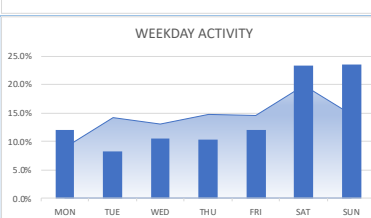
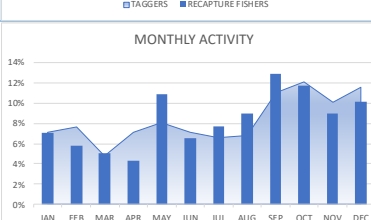
Where fishers live
that recaptured fish
Tagged (red-orange
heat map)
Where recapture
fishers live (red stars)
Overall
2019-2022

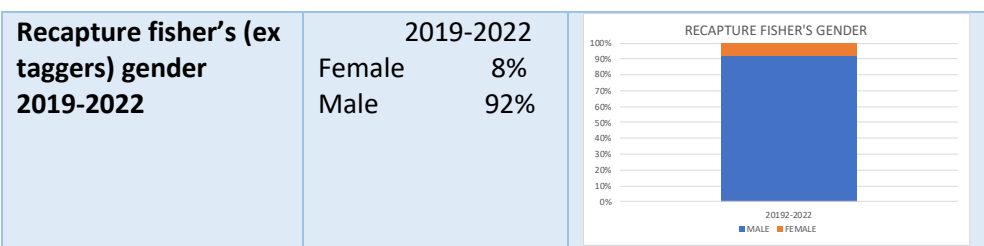


Where fishers live
that recaptured fish
Tagged (red-orange
heat map)
Where recapture
fishers live (red stars)
Cairns-Townsville
2019-2022

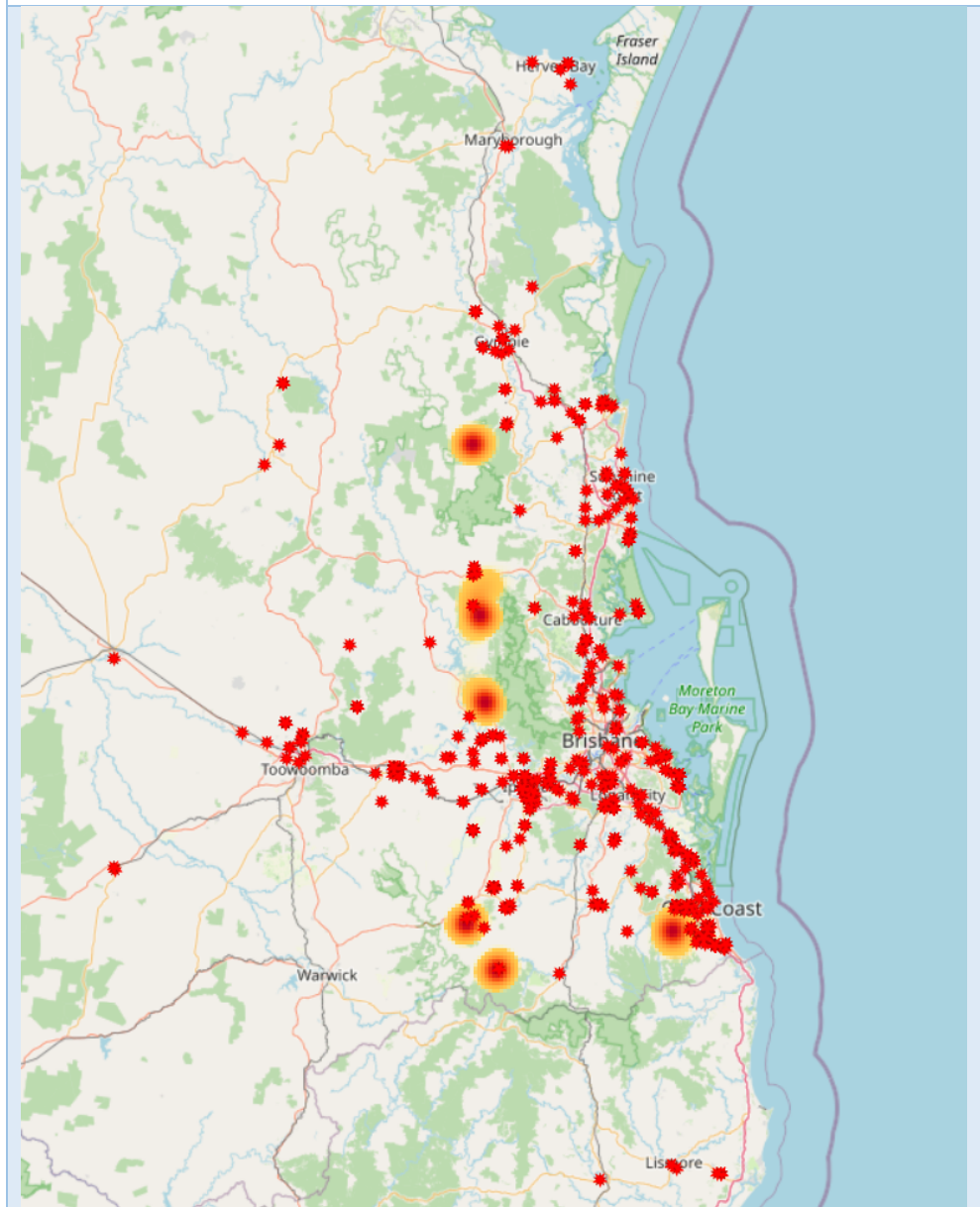


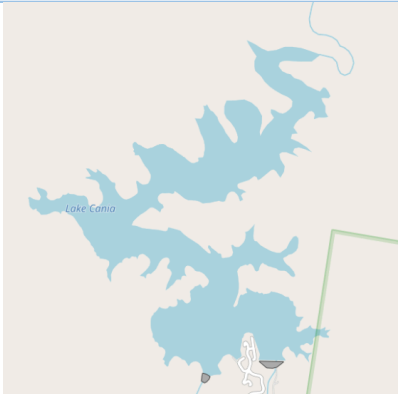
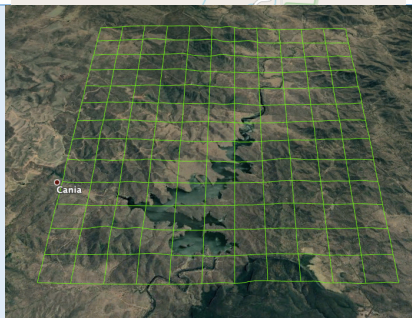
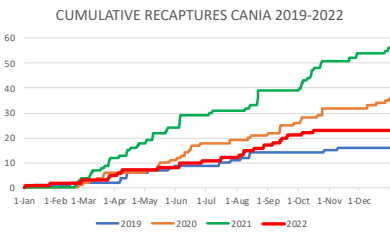
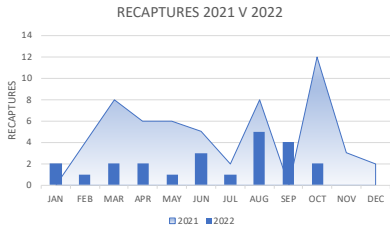
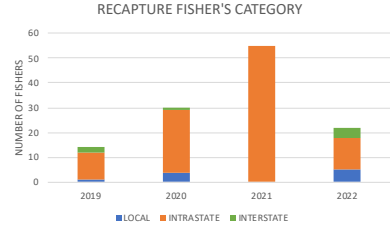
MEASURE	ACTUAL	GRAPH										
SOUTH EAST QLD	FRESHWATER	IMPOUNDMENTS										
SEQ impoundments stocked with Australian Bass Golden Perch		<div><div>LAKE SOMERSET</div><div>LAKE WIVENHOE</div><div>LAKE ADVANCETOWN</div><div>LAKE MOOGERAH</div><div>LAKE MAROON</div><div>LAKE BORUMBA</div></div>										
Key observations	The impact of significant overtopping from the floods and spilling of fish from the lakes resulted in a reduction in effort and recaptures. Fish spilling from the lakes resulted in a shift in activity to below the dams (see SEQ estuaries).											
SEQ impoundments grid maps	Grid maps Somerset LS01 Wivenhoe LWH Moogerah LMH Maroon LMM Advancetown ADV Borumba LBY											
Cumulative recaptures 2019-2022	<div>Recaptures</div> <table><tr><td>2019</td><td>158</td></tr><tr><td>2020</td><td>170</td></tr><tr><td>2021</td><td>225</td></tr><tr><td>2022</td><td>135</td></tr><tr><td>22-21</td><td>-40%</td></tr></table>	2019	158	2020	170	2021	225	2022	135	22-21	-40%	<div>CUMULATIVE RECAPTURES SEQ IMPOUNDMENTS 2019-2022</div>
2019	158											
2020	170											
2021	225											
2022	135											
22-21	-40%											
Recaptures by month 2021-2022	<div>Most</div> <table><tr><td>2021</td><td>May</td><td>33</td></tr><tr><td>2022</td><td>Nov</td><td>21</td></tr></table>	2021	May	33	2022	Nov	21	<div>SEQ IMPOUNDMENT RECAPTURES 2021 V 2022</div>				
2021	May	33										
2022	Nov	21										
Recapture fisher's category 2019-2022	<div>Local</div> <table><tr><td>2019</td><td>60</td></tr><tr><td>2020</td><td>75</td></tr><tr><td>2021</td><td>115</td></tr><tr><td>2022</td><td>86</td></tr></table>	2019	60	2020	75	2021	115	2022	86	<div>RECAPTURE FISHER'S CATEGORY</div>		
2019	60											
2020	75											
2021	115											
2022	86											

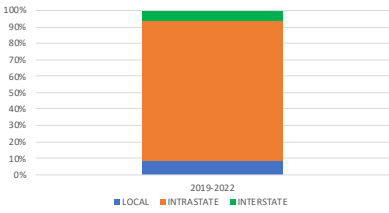
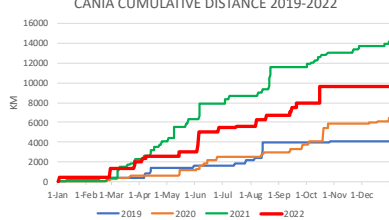
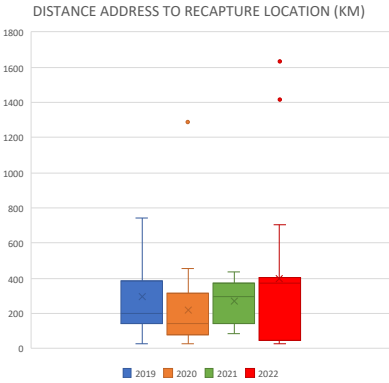
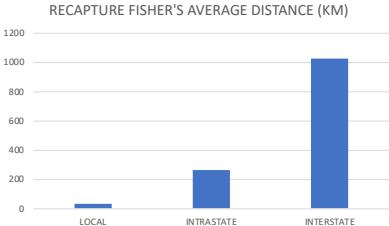
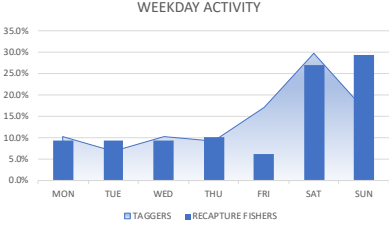
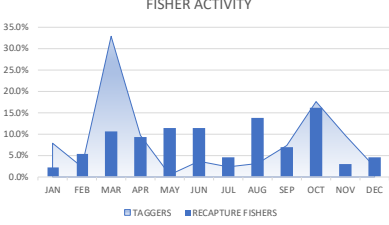
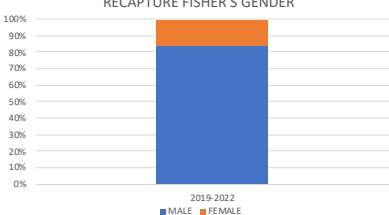
Recapture fisher's category Local Intrastate Interstate 2019-2022	2019	Local 40%		
	2020	47%		
	2021	53%		
	2022	64%		
Cumulative distance (km) address or postcode to recapture location 2019-2022	Distance (km)			
	2019	10779		
	2020	10615		
	2021	16305		
	2022	11227		
22-21	-31%			
Average distance (km) where recapture fishers live to recapture location 2019-2022	Av distance (km)			
	2019	95		
	2020	67		
	2021	76		
	2022	85		
Average distance where fishers live to recapture location (travel proxy) Local (L) Intrastate (QLD) 2019-2022	Av distance (km)			
		L	QLD	
	2019	29	81	
	2020	26	86	
	2021	23	104	
	2022	20	68	
Distance (km) where fishers live to recapture location 2019-2022				
Weekday fished Taggers and recapture fishers 2019-2022	Most Tag Recap			
	Sat	20%	23%	
	Sun	15%	24%	
Month fished Taggers and recapture fishers 2019-2022	Most Tag Recap			
	Oct	12%	12%	
	Dec	12%		
	Sep		13%	



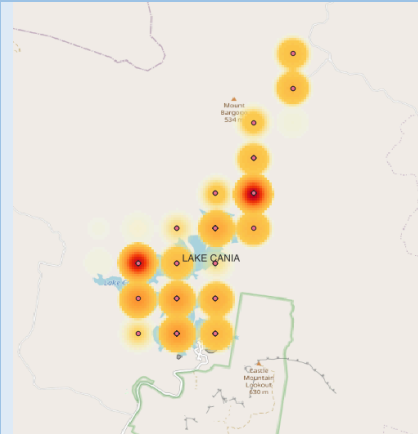
**Tagged fish in impoundments (red-orange heatmaps) and where recapture fishers live (red stars)
2019-20221**



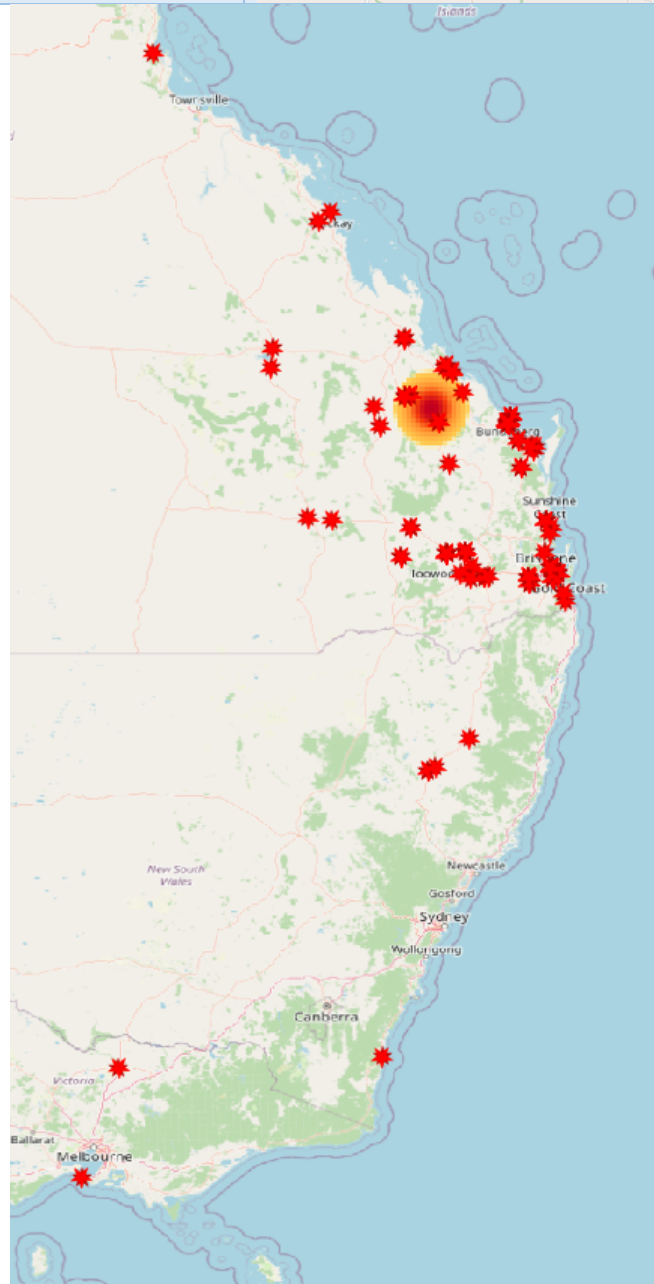
MEASURE	ACTUAL	GRAPH
CENTRAL QLD	FRESHWATER	IMPOUNDMENT
Lake Cania Impoundment near Monto stocked with Bass and Golden Perch	Lake Cania	
Lake Cania grid maps	Lake Cania LCG	
Key observations	Unlike impoundments further south Cania did not spill this year. However with many of its fishers coming from areas affected by flooding activity and recaptures were subdued particularly until after winter. As a result recaptures were down.	
Cumulative recaptures 2019-2022	<div>Recaptures</div> <div>201916</div> <div>202036</div> <div>202156</div> <div>202223</div> <div>22-21-59%</div>	<div>CUMULATIVE RECAPTURES CANIA 2019-2022</div> 
Recaptures by month 2019-2022	<div>Most</div> <div>2021 Oct12</div> <div>2022 Aug5</div>	<div>RECAPTURES 2021 V 2022</div> 
Recapture fisher's category Local Intrastate Interstate 2019-2022	<div>Intrastate</div> <div>201911</div> <div>202025</div> <div>202155</div> <div>202213</div>	<div>RECAPTURE FISHER'S CATEGORY</div> 


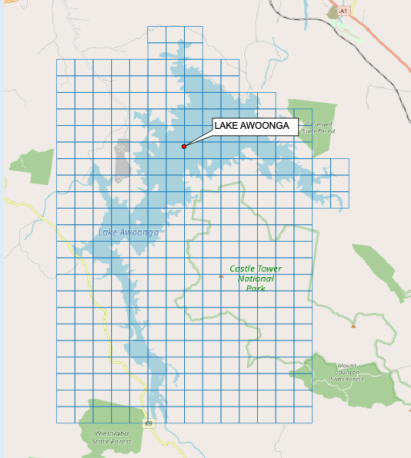
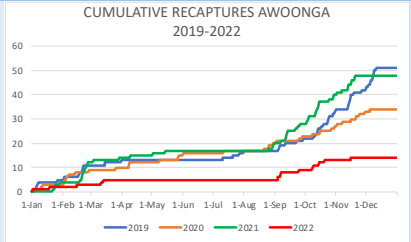
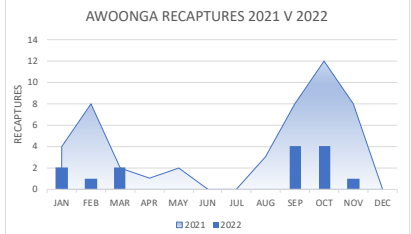
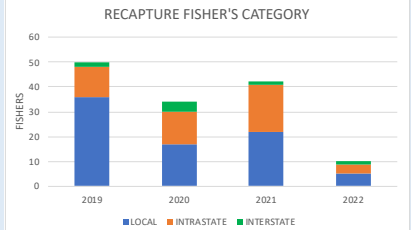
Recapture fisher's category Local Intrastate Interstate 2019-2022	Category Local 8% Intrastate 86% 2021 6%	RECAPTURE FISHER'S CATEGORY 
Cumulative distance (km) address or postcode to recapture location 2019-2022		CANIA CUMULATIVE DISTANCE 2019-2022 
Distance (km) where fishers live to recapture location 2019-2022		DISTANCE ADDRESS TO RECAPTURE LOCATION (KM) 
Average distance (km) where recapture fishers live to recapture location 2019-2022	Av distance (km) Local 35 Intrastate 262 Interstate 1027	RECAPTURE FISHER'S AVERAGE DISTANCE (KM) 
Weekday fished Taggers and recapture fishers 2019-2022	Most Tag 30% Recap 27% Sat 17% Sun 29% Fri 17%	WEEKDAY ACTIVITY 
Month fished Taggers and recapture fishers 2019-2022	Most Tag 32% Recap 16% Oct 18% Aug 14%	FISHER ACTIVITY 
Recapture fisher's (ex taggers) gender 2019-2022	2019-2022 Female 16% Male 84%	RECAPTURE FISHER'S GENDER 

Tagged fish (red-orange heatmap) and recaptures (dots) 2019-2022



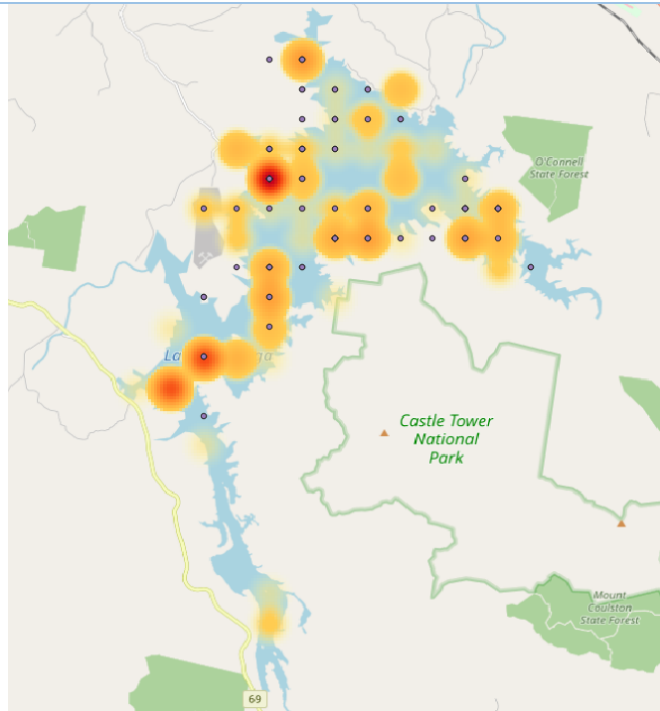
**Where fishers live that recaptured fish Tagged (red-orange heat map)
Where recapture fishers live (red stars) 2019-2022**



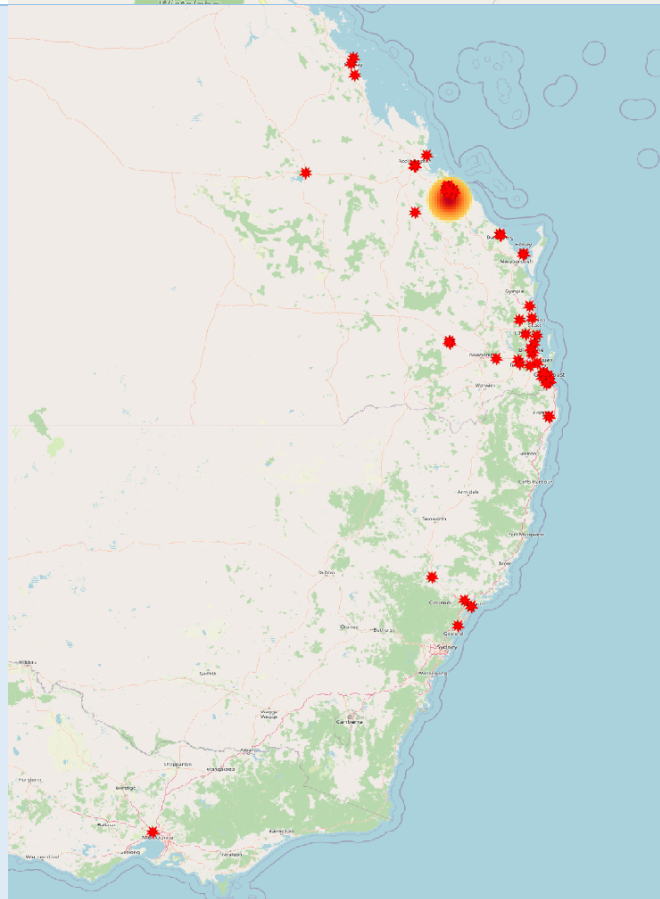
MEASURE	ACTUAL	GRAPH										
CENTRAL QLD	FRESHWATER	IMPOUNDMENT										
Lake Awoonga Impoundment near Gladstone stocked with Barramundi	Lake Awoonga											
Lake Awoonga grid map	Lake Awoonga GLA											
Key observations	Activity in Awoonga was subdued this year with flooding impacting on southern fishers followed by a normal quiet period over winter with only a modest recovery towards the end of the year.											
Cumulative recaptures 2019-2022	<div>Recaptures</div> <table><tr><td>2019</td><td>51</td></tr><tr><td>2020</td><td>34</td></tr><tr><td>2021</td><td>48</td></tr><tr><td>2022</td><td>14</td></tr><tr><td>22-21</td><td>-71%</td></tr></table>	2019	51	2020	34	2021	48	2022	14	22-21	-71%	<div>CUMULATIVE RECAPTURES AWOONGA 2019-2022</div> 
2019	51											
2020	34											
2021	48											
2022	14											
22-21	-71%											
Recaptures by month 2019-2022	<div>Most</div> <table><tr><td>2021</td><td>Oct</td><td>12</td></tr><tr><td>2022</td><td>Sep</td><td>4</td></tr><tr><td>2022</td><td>Oct</td><td>4</td></tr></table>	2021	Oct	12	2022	Sep	4	2022	Oct	4	<div>AWOONGA RECAPTURES 2021 V 2022</div> 	
2021	Oct	12										
2022	Sep	4										
2022	Oct	4										
Recapture fisher's category Local Intrastate Interstate 2019-2022	<div>Local</div> <table><tr><td>2019</td><td>36</td></tr><tr><td>2020</td><td>17</td></tr><tr><td>2021</td><td>22</td></tr><tr><td>2022</td><td>5</td></tr></table>	2019	36	2020	17	2021	22	2022	5	<div>RECAPTURE FISHER'S CATEGORY</div> 		
2019	36											
2020	17											
2021	22											
2022	5											

Recapture fisher's category Local Intrastate Interstate 2019-2022	<table><tr><td></td><td>Local</td></tr><tr><td>2019</td><td>72%</td></tr><tr><td>2020</td><td>50%</td></tr><tr><td>2021</td><td>52%</td></tr><tr><td>2022</td><td>50%</td></tr></table>		Local	2019	72%	2020	50%	2021	52%	2022	50%	<p>RECAPTURE FISHER'S CATEGORY</p> <table><thead><tr><th>Year</th><th>Local</th><th>Intrastate</th><th>Interstate</th></tr></thead><tbody><tr><td>2019</td><td>72%</td><td>28%</td><td>0%</td></tr><tr><td>2020</td><td>50%</td><td>40%</td><td>10%</td></tr><tr><td>2021</td><td>52%</td><td>38%</td><td>10%</td></tr><tr><td>2022</td><td>50%</td><td>40%</td><td>10%</td></tr></tbody></table>	Year	Local	Intrastate	Interstate	2019	72%	28%	0%	2020	50%	40%	10%	2021	52%	38%	10%	2022	50%	40%	10%																																															
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Cumulative distance (km) where fishers live to recapture location 2019-2022	<table><tr><td></td><td>Distance (km)</td></tr><tr><td>2019</td><td>5203</td></tr><tr><td>2020</td><td>9171</td></tr><tr><td>2021</td><td>9216</td></tr><tr><td>2022</td><td>2616</td></tr><tr><td>22-21</td><td>-72%</td></tr></table>		Distance (km)	2019	5203	2020	9171	2021	9216	2022	2616	22-21	-72%	<p>AWOONGA CUMULATIVE DISTANCE 2019-2022</p> <table><thead><tr><th>Year</th><th>Jan</th><th>Feb</th><th>Mar</th><th>Apr</th><th>May</th><th>Jun</th><th>Jul</th><th>Aug</th><th>Sep</th><th>Oct</th><th>Nov</th><th>Dec</th></tr></thead><tbody><tr><td>2019</td><td>5203</td><td>5203</td><td>5203</td><td>5203</td><td>5203</td><td>5203</td><td>5203</td><td>5203</td><td>5203</td><td>5203</td><td>5203</td><td>5203</td></tr><tr><td>2020</td><td>9171</td><td>9171</td><td>9171</td><td>9171</td><td>9171</td><td>9171</td><td>9171</td><td>9171</td><td>9171</td><td>9171</td><td>9171</td><td>9171</td></tr><tr><td>2021</td><td>9216</td><td>9216</td><td>9216</td><td>9216</td><td>9216</td><td>9216</td><td>9216</td><td>9216</td><td>9216</td><td>9216</td><td>9216</td><td>9216</td></tr><tr><td>2022</td><td>2616</td><td>2616</td><td>2616</td><td>2616</td><td>2616</td><td>2616</td><td>2616</td><td>2616</td><td>2616</td><td>2616</td><td>2616</td><td>2616</td></tr></tbody></table>	Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2019	5203	5203	5203	5203	5203	5203	5203	5203	5203	5203	5203	5203	2020	9171	9171	9171	9171	9171	9171	9171	9171	9171	9171	9171	9171	2021	9216	9216	9216	9216	9216	9216	9216	9216	9216	9216	9216	9216	2022	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616
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2020	9171	9171	9171	9171	9171	9171	9171	9171	9171	9171	9171	9171																																																																			
2021	9216	9216	9216	9216	9216	9216	9216	9216	9216	9216	9216	9216																																																																			
2022	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616	2616																																																																			
Average distance (km) where recapture fishers live to recapture location 2019-2022	<table><tr><td></td><td>Av distance (km)</td></tr><tr><td>Local</td><td>23</td></tr><tr><td>Intrastate</td><td>349</td></tr><tr><td>Interstate</td><td>1955</td></tr></table>		Av distance (km)	Local	23	Intrastate	349	Interstate	1955	<p>RECAPTURE FISHER'S AVERAGE DISTANCE</p> <table><thead><tr><th>Category</th><th>Average Distance (km)</th></tr></thead><tbody><tr><td>Local</td><td>23</td></tr><tr><td>Intrastate</td><td>349</td></tr><tr><td>Interstate</td><td>1955</td></tr></tbody></table>	Category	Average Distance (km)	Local	23	Intrastate	349	Interstate	1955																																																													
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Tagged fish (red-orange heatmap) and recaptures (dots) 2019-2022



**Where fishers live that recaptured fish
Tagged (red-orange heat map)
Where recapture fishers live (red stars)
2019-2022**



Data sources

Data used in the GOFISH-22 Crystal Bowl are:

- Tag and recapture records for Queensland from Infofish Suntag database from http://crystalbowl.infofishaustralia.com.au/infofish/f_infofish.htm
- Postcodes from Australia Post website at <https://auspost.com.au/postcode>
- Fitzroy River flow from <https://water-monitoring.information.qld.gov.au/>
- Cardwell rainfall from <http://www.bom.gov.au/climate/dwo/IDCJDW4027.latest.shtml>
- Dam levels for Cania from Sunwater <https://www.sunwater.com.au/water-data/historical-dam-capacity/>
- Dam levels for SEQ Bass impoundments from SEQwater at <https://www.seqwater.com.au/historic-dam-levels>

Data analysis

- Distance from where fishers live and where they went fishing is based on straight line distance between the map grid centroid or estimated GPS where the fish was recaptured and their residential address, or town or suburb or centroid of their postcode, whichever is provided and calculated using Google Earth.
- Fishers were categorised as local being less than 1hr travel from where they lived to the recapture location (less than 50km), intrastate being from anywhere else in Queensland, and interstate being from outside Queensland.