
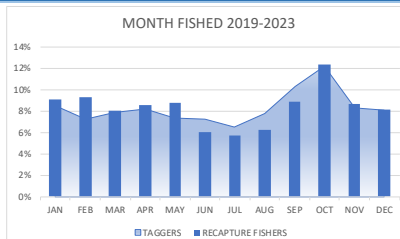
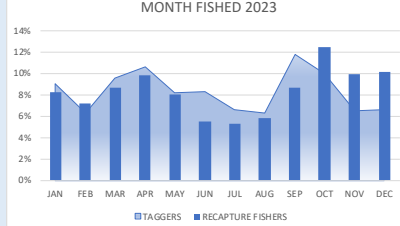
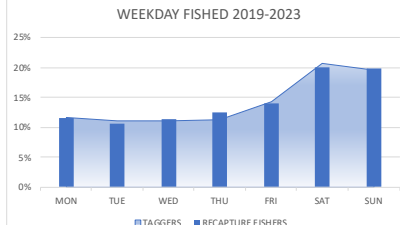
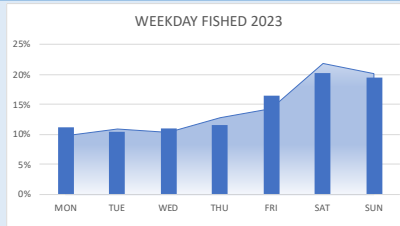




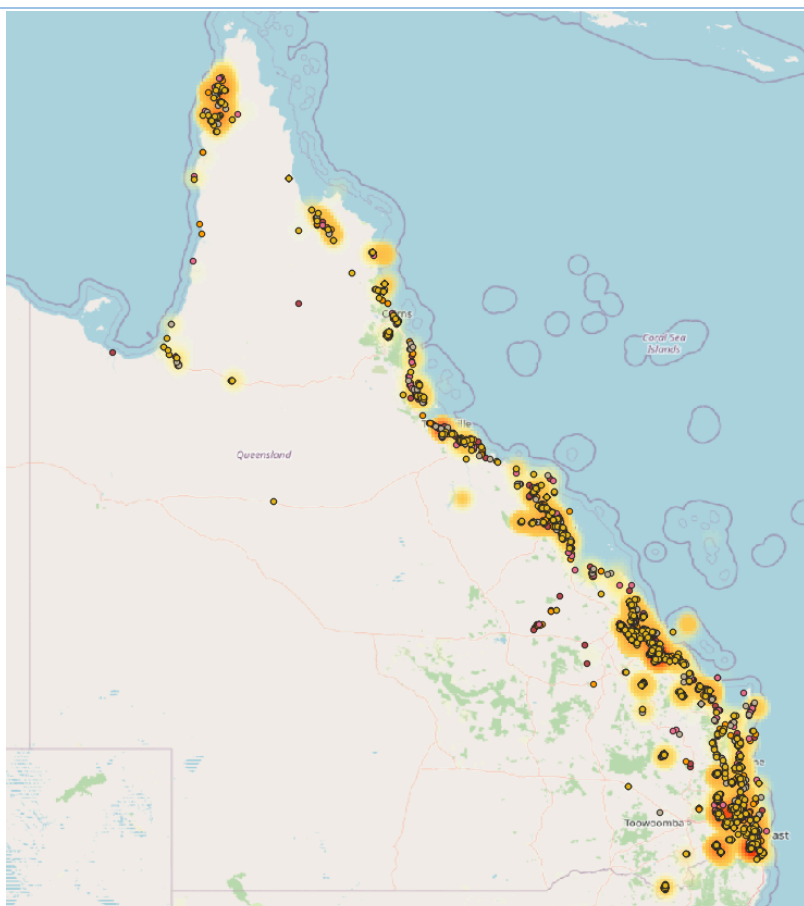
QUEENSLAND FISH TAGGED AND RECAPTURED 2014-2023

QUEENSLAND FISHER ACTIVITY REVIEW 2019-2023

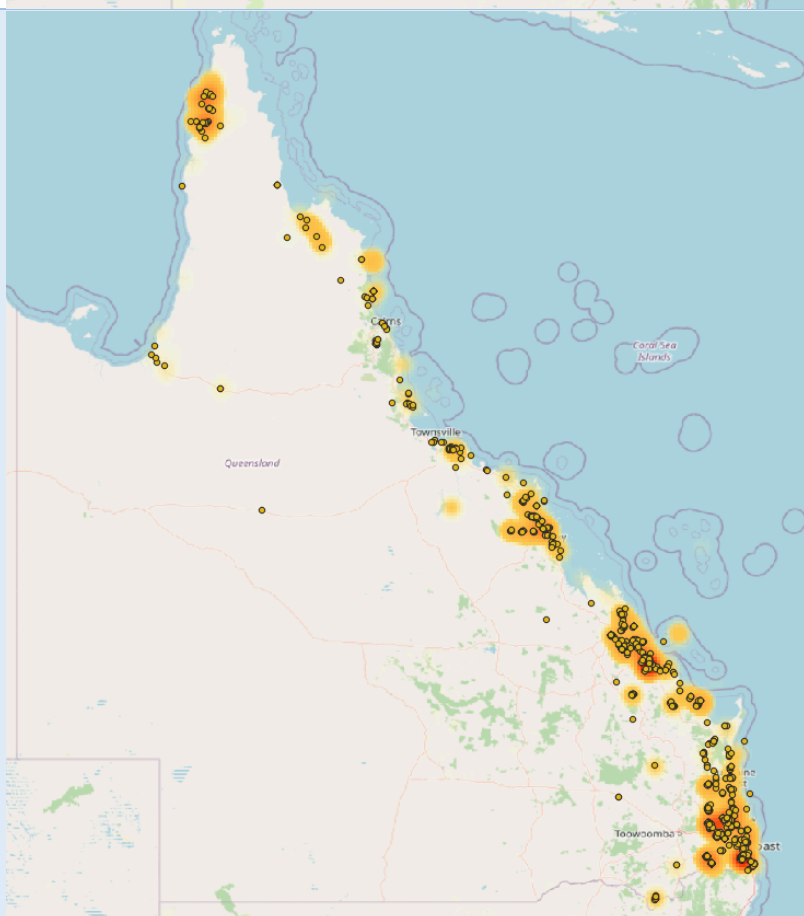
QUEENSLAND STATEWIDE REVIEW 2023	
INFORMATION RATING	★★★★
<p>This dashboard is a 10-year summary of key species tagged and recaptured over the past decade from 2014-2023 and a 5-year summary of taggers and those recapturing fish from 2019-2023 in Queensland. Detailed regional dashboards are also available for coastal estuaries and inland impoundments.</p> <p>Fisher activity includes taggers and those recapturing fish covering month and day of fishing activity. At the statewide level there is little difference in their monthly and weekday activity. As tagging is predominantly in estuaries and impoundments fish are not highly mobile so recaptures are made in the same area as fish are tagged. Tag locations are associated with waterways in close proximity to population centres and cover most areas of the state where recreational fishing occurs.</p> <p>At the statewide level fishing effort, based on days fished by taggers and those recapturing fish, suggests that Covid restrictions had little overall impact on fishing in 2020 and 2021 although there were some regions that were impacted more than others, particularly those fished by travelling fishers.</p> <p>Travel by intrastate and interstate fishers was down in 2020 when Covid travel restrictions were in place and down again in 2023, possibly a reflection of the impact of cost-of-living pressures, with the numbers of those fishers and the proxy distance for travel both down. While recaptures are up 9% on 2022 the cumulative proxy travel distance is down by 22%.</p> <p>Interstate fishers are mostly from NSW and Vic accounting for 91% of recaptures made by interstate fishers.</p> <p>Overall tag and recapture details are provided for the 3 species tagged the most being Barramundi, Bass and Flathead. These species account for 55% of the total tagging effort. Based on recaptures of legal sized fish by other than taggers, 50% of Barramundi, 12% of Bass and 57% of Flathead were kept.</p> <p>Tag rates and fish lengths at the statewide level have remained steady over the past decade and have not shown any particular trend.</p>	

QUEENSLAND			STATEWIDE PERSPECTIVE																																						
All of Queensland																																									
FISHERS	ACTUAL		GRAPH or MAP																																						
DATA RELIABILITY																																									
Sample size (days fished)	<table><tr><td>Reliability level</td><td colspan="2">LOW</td><td colspan="2">MODERATE</td><td colspan="2">MODERATE</td><td colspan="2">HIGH</td></tr><tr><td>Samples</td><td>10</td><td>41</td><td>68</td><td>271</td><td>384</td><td>664</td><td></td><td></td></tr><tr><td>Confidence</td><td colspan="2">80%</td><td>80%</td><td>90%</td><td>90%</td><td>95%</td><td colspan="2">99%</td></tr><tr><td>Error</td><td colspan="2">20%</td><td>10%</td><td>10%</td><td>5%</td><td>5%</td><td colspan="2">5%</td></tr></table>					Reliability level	LOW		MODERATE		MODERATE		HIGH		Samples	10	41	68	271	384	664			Confidence	80%		80%	90%	90%	95%	99%		Error	20%		10%	10%	5%	5%	5%	
Reliability level	LOW		MODERATE		MODERATE		HIGH																																		
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Recaptures (blue arrow)																																									
Tag days (orange arrow)																																									
Confidence %																																									
Error %																																									
2019-2023																																									
ACTIVITY																																									
Month fished	Month		MONTH FISHED 2019-2023																																						
Taggers (19,117)	Taggers	Oct	12%																																						
Recapture fishers (7,156)	Recaps	Sep	10%																																						
2019-2023		Oct	12%																																						
		Sep	9%																																						
Month fished	Month		MONTH FISHED 2023																																						
Taggers (3,284)	Taggers	Sep	12%																																						
Recapture fishers (1,368)	Recaps	Oct	10%																																						
2023		Oct	13%																																						
		Nov	10%																																						
Weekday fished	Day		WEEKDAY FISHED 2019-2023																																						
Taggers (3,284)	Taggers	Weekends	40%																																						
Recapture fishers (1,368)	Recaps	Weekdays	60%																																						
2019-2023		Sat	20%																																						
		Sun	20%																																						
Weekday fished	Day		WEEKDAY FISHED 2023																																						
Taggers (3,284)	Taggers	Weekends	42%																																						
Recapture fishers (1,368)	Recaps	Weekdays	38%																																						
2023		Weekends	40%																																						
		Weekdays	60%																																						

Tagged fish (red-orange heatmap) (95,370)
Recaptured fish (dots) (2019-2023) (7,152)



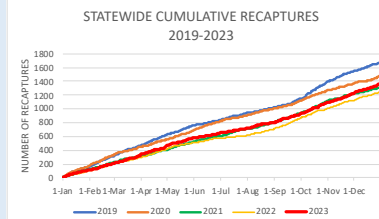
Tagged fish (red-orange heatmap) (20,121)
Recaptured fish (dots) (2023) (1,367)



EFFORT

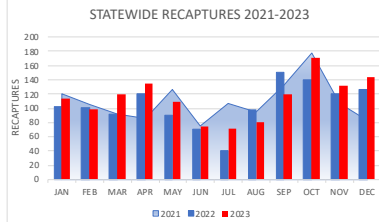
Recapture fishers
Cumulative recaptures
2019-2023

Year	Recaptures
2019	1685
2020	1475
2021	1305
2022	1251
2023	1366

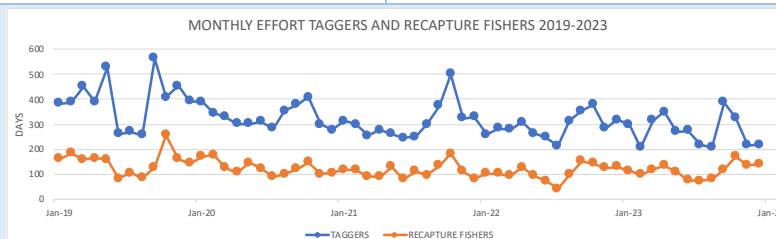


Recapture fishers
Monthly recaptures
2021-2023

Year	Recaptures
2021	1305
2022	1251
2023	1366
21-22	-4.1%
22-23	+9.2%



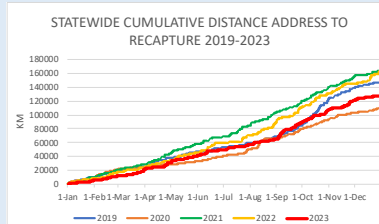
Fisher effort
Days fished per month
Taggers
Recapture fishers
2019-2023



TRAVEL

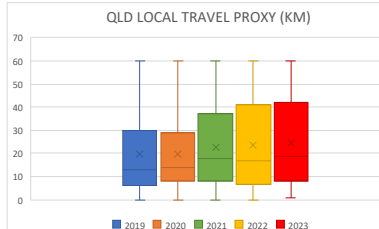
Cumulative distance
where fishers live to
recapture location (travel
proxy)
2019-2023

Year	Distance (km)
2019	147526
2020	110778
2021	163498
2022	164264
2023	128180
22-23	-22.0%



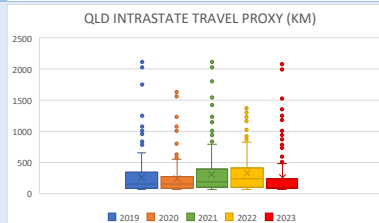
Distance (km) address or
postcode to recapture
location
Travel proxy
Local (1-59km)
2019-2023

	Av Distance (km)
2019	20
2020	20
2021	23
2022	23
2023	25



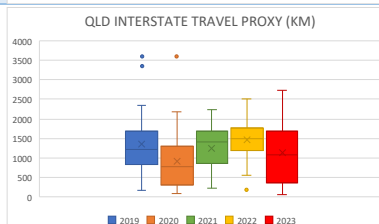
Distance (km) address or
postcode to recapture
location
Travel proxy
Intrastate
2019-2023

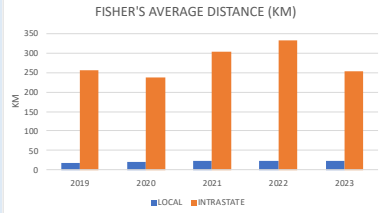
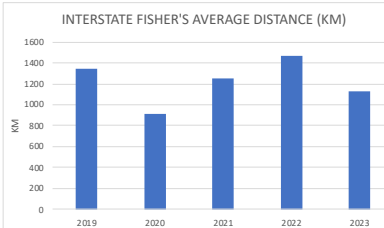
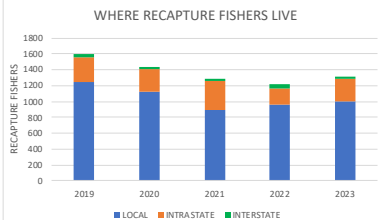
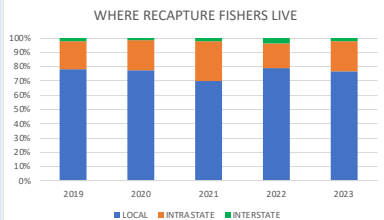
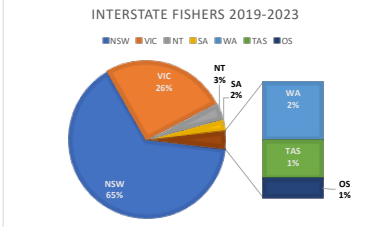
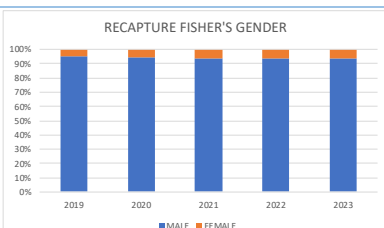
	Av Distance (km)
2019	255
2020	238
2021	303
2022	331
2023	251



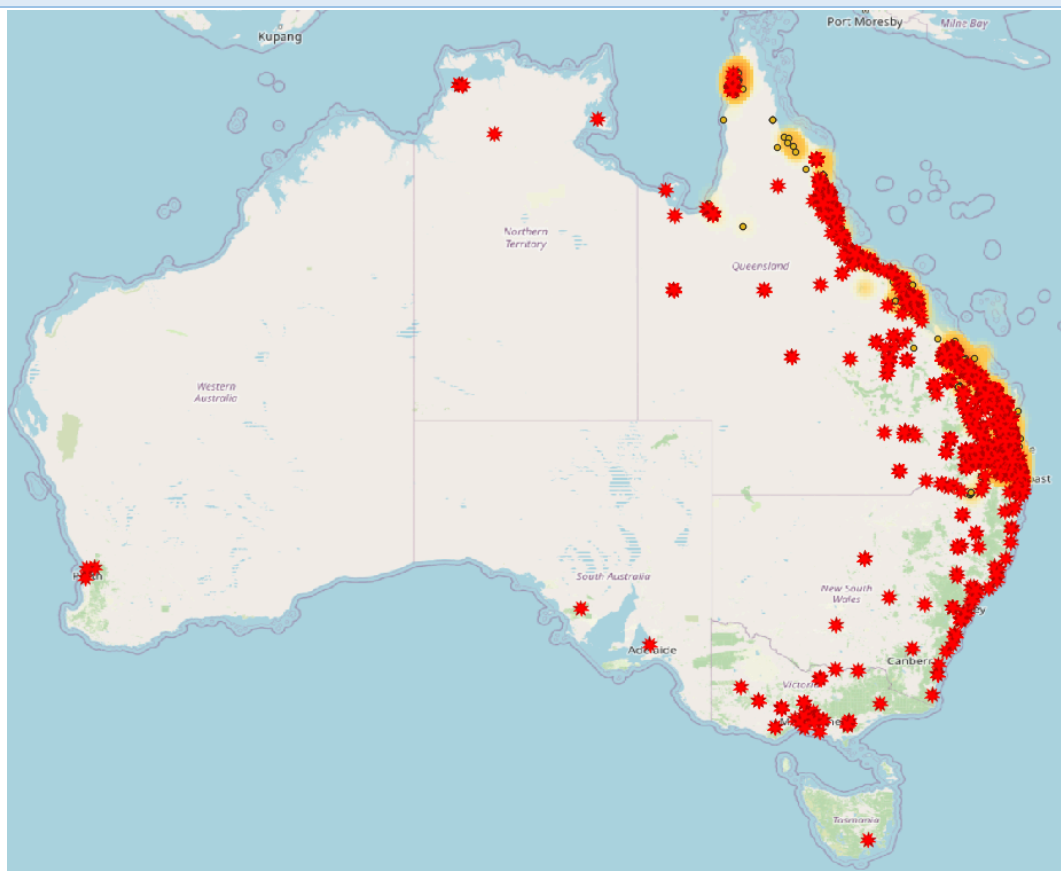
Distance (km) address or
postcode to recapture
location
Travel proxy
Interstate
2019-2023

	Av Distance (km)
2019	1342
2020	910
2021	1249
2022	1464
2023	1140

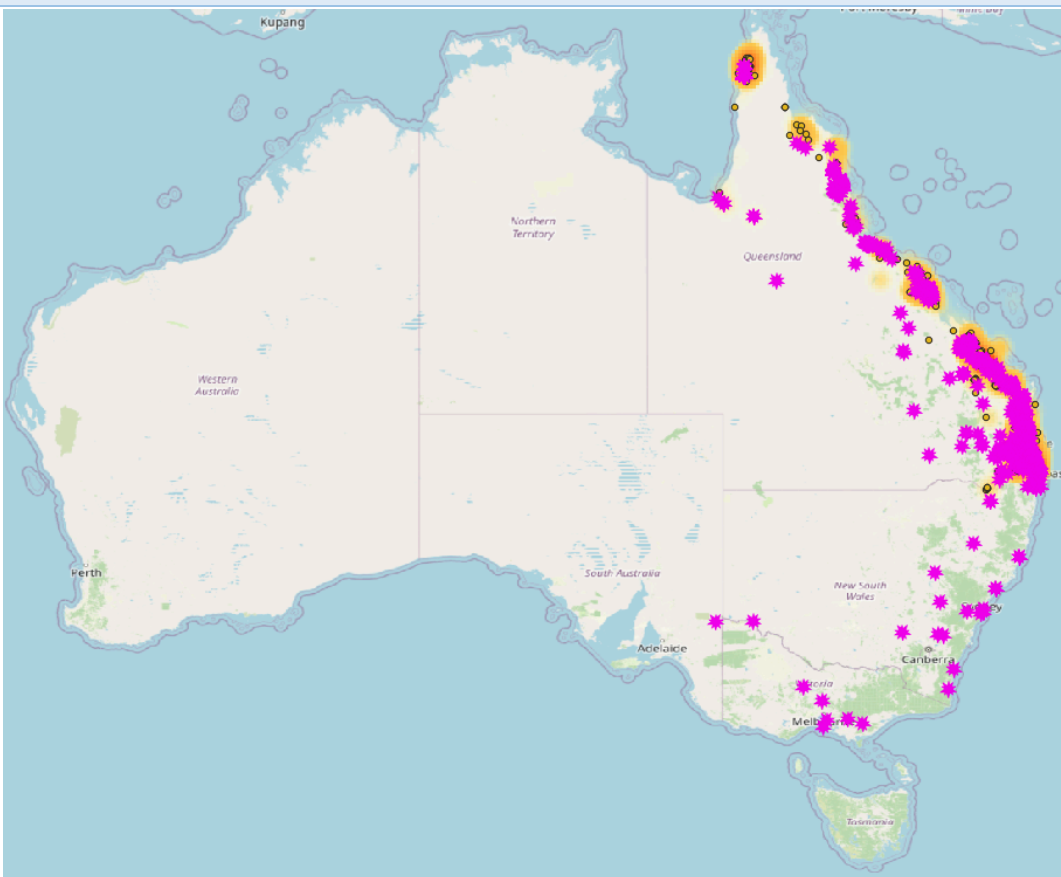




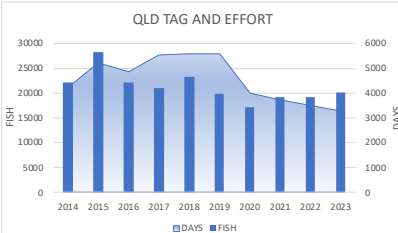
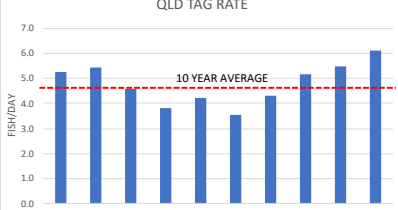
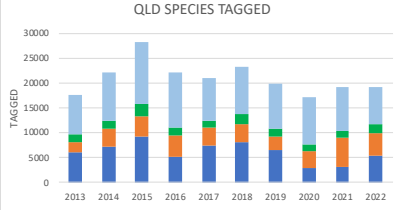
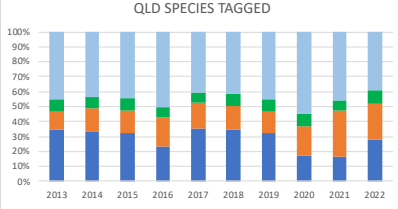
Average distance where fishers live to recapture location (travel proxy) Local (L) Intrastate (QLD) 2019-2023		Av distance (km)		
	2019	L	QLD	
	2020	20	255	
	2021	20	238	
	2022	23	303	
	2023	23	331	
Average distance where fishers live to recapture location (travel proxy) Interstate 2019-2023		Av Distance (km)		
	2019		1342	
	2020		910	
	2021		1249	
	2022		1464	
	2023		1140	
DEMOGRAPHICS				
Where recapture fishers live Local (1-59km) (L) Intrastate (QLD) Interstate 2019-2023		L	QLD	
	2019	1243	312	
	2020	1117	293	
	2021	899	356	
	2022	961	210	
	2023	1007	273	
Recapture fisher's category Local (1-59km) Intrastate Interstate 2019-2023		L	QLD	
	2019	78%	20%	
	2020	78%	20%	
	2021	70%	28%	
	2022	79%	17%	
	2023	77%	21%	
Interstate of origin 2019-2023		State		
	NSW		65%	
	VIC		26%	
	NT		4%	
	SA		2%	
	WA		2%	
	TAS		1%	
	Overseas		1%	
Recapture fisher's (ex-taggers) gender 2019-2023		Male	Female	
	2019	95%	5%	
	2020	94%	6%	
	2021	94%	6%	
	2022	93%	7%	
	2023	93%	7%	

**Where fishers live (red stars) that recaptured fish (5,785)
2019-2022**



**Where fishers live (pink stars) that recaptured fish (1,366)
2023**

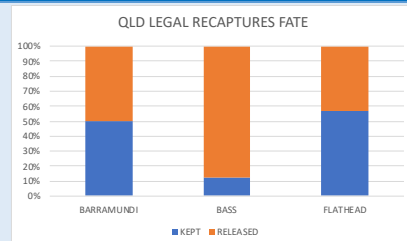


FISH	ACTUAL			GRAPH or MAP
BARRAMUNDI	AUSTRALIAN BASS			DUSKY FLATHEAD
				
EFFORT				
Catch and effort taggers	High	Low	Now	
Tagged fish	Tagged			
Days fished	2015	2020	2023	
2014-2023	28280	17075	20086	
Days fished	2019	2022	2023	
	5574	3495	3284	
Fish tagged	Tagged	Recaptured		
Recaptured	212360	15711		
2014-2023	Recapture rate			
	7.4%			
TAG RATE				
Tag rate	High	Low	Now	
Fish/day	Tag rate			
2014-2023	2022	2019	2023	
	5.5	3.5	6.1	
	10 year average		4.7	
SPECIES				
Species composition	Top 3 species			
Numbers tagged	Barramundi	61137		
2014-2023	Bass	41656		
	Flathead	16430		
	Other species	93137		
Species composition	Barramundi	29%		
Percentage tagged	Bass	20%		
2014-2023	Flathead	8%		
	Top 3	56%		

FATE

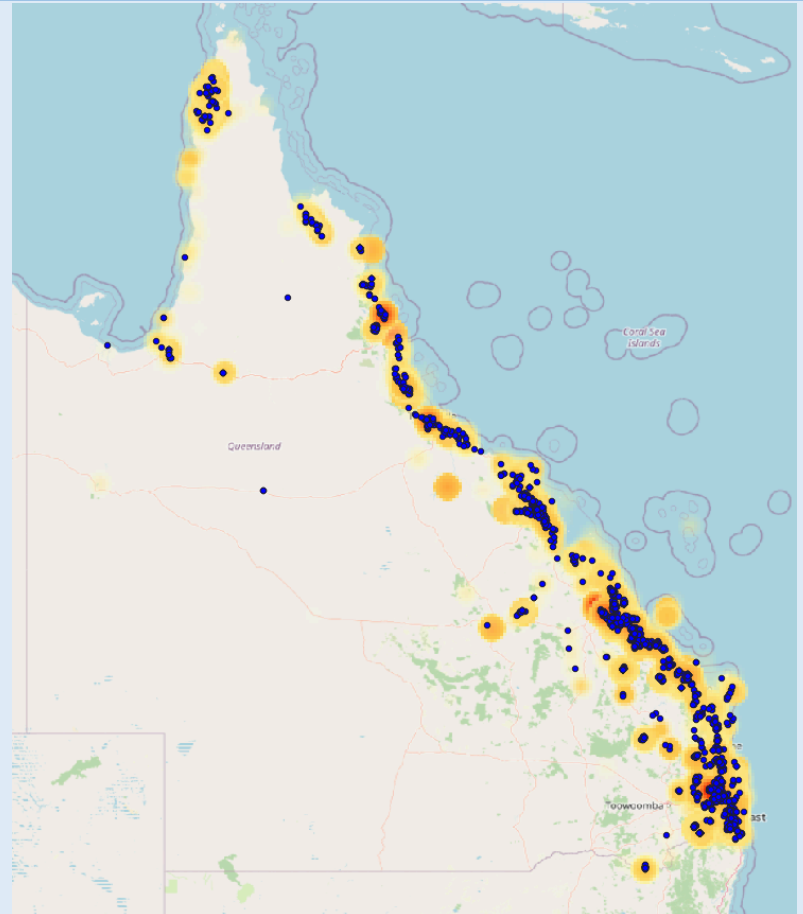
Legal recaptures kept or released by recfishers (ex-taggers)
2014-2023




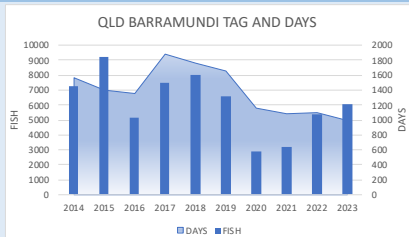
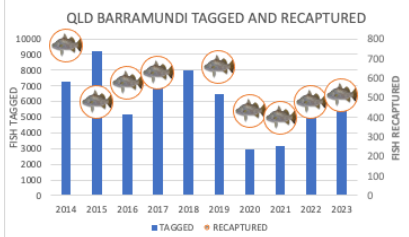
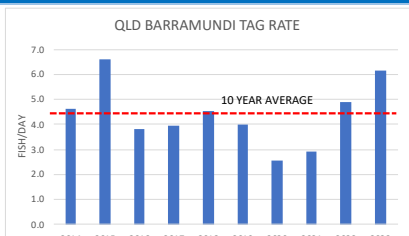
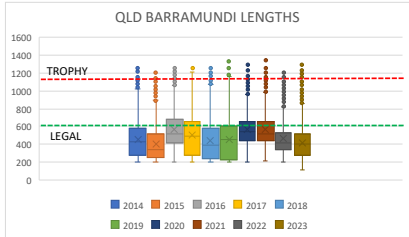
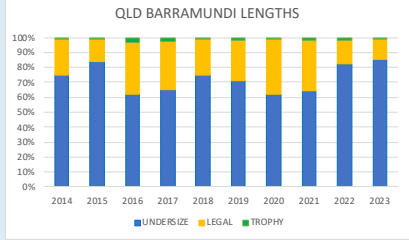
Legal	Fish	Kept
Barramundi	2480	50%
Bass	2495	12%
Flathead	627	57%



TAG LOCATIONS

All fish
Tagged (red-orange heatmap) (212,360)
Recaptured (blue dots) (12,716)
2014-2023



BARRAMUNDI		ACTUAL		GRAPH or MAP																					
																									
DATA RELIABILITY																									
Sample size (fish/year)		<table><tr><td>Reliability level</td><td>LOW</td><td>MODERATE</td><td>MODERATE</td><td>HIGH</td></tr><tr><td>Samples</td><td>10</td><td>41</td><td>68</td><td>271</td></tr><tr><td>Confidence</td><td>80%</td><td>80%</td><td>90%</td><td>90%</td></tr><tr><td>Error</td><td>20%</td><td>10%</td><td>10%</td><td>5%</td></tr></table>		Reliability level	LOW	MODERATE	MODERATE	HIGH	Samples	10	41	68	271	Confidence	80%	80%	90%	90%	Error	20%	10%	10%	5%	 	
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Recaptured (blue arrow)																									
Tagged (orange arrow)																									
Confidence %																									
Error %																									
2019-2023																									
EFFORT																									
Catch and effort taggers		High Low Now																							
Tagged fish		Tagged																							
Tag days		2015 2020 2023																							
2014-2023		9237 2927 6090																							
Days fished		2017 2021 2023																							
		1882 1085 993																							
Fish tagged and recaptured from year tagged		Tagged Recaptured																							
2014-2023		61209 5721																							
		Recapture rate																							
		9.4%																							
TAG RATE																									
Tag rate		High Low Now																							
Fish/day		Tag rate																							
2014-2023		2015 2020 2023																							
		6.6 2.5 6.1																							
		10 year average		4.4																					
LENGTHS																									
Average length (mm)		High Low Now																							
Bars show length range		Average length																							
Dots show outliers		2021 2015 2023																							
2014-2023		567 407 417																							
		Max																							
		2021 2022 2023																							
		1340 1210 1300																							
Species composition		High Low Now																							
Percentage tagged		Legal-trophy																							
2014-2023		2020 2015 2023																							
		37% 15% 14%																							
		Trophy																							
		2016 2015 2023																							
		3% 1% 1%																							

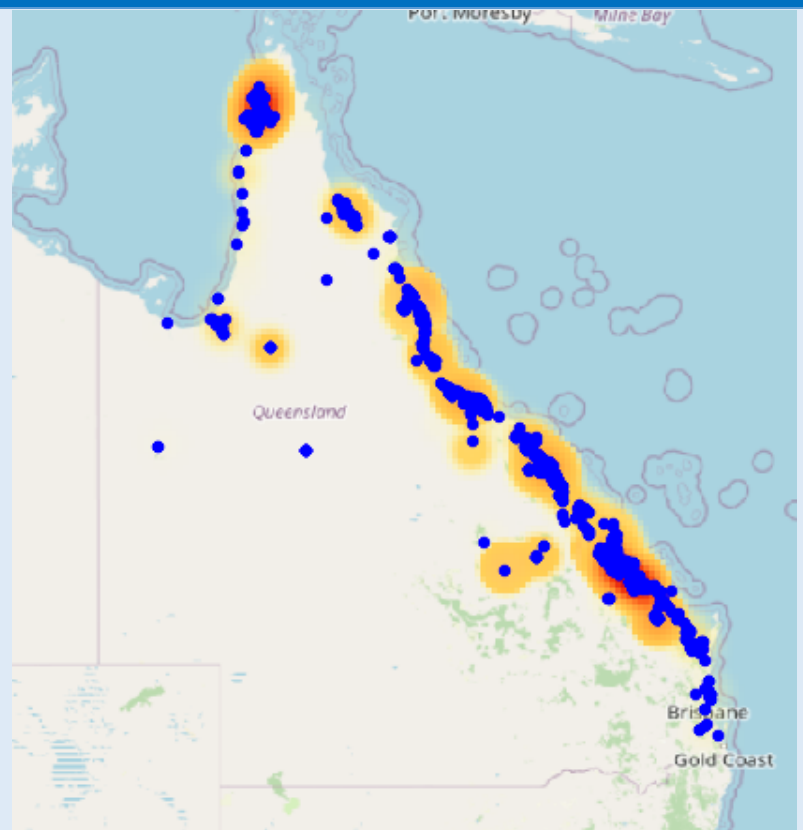
LOCATIONS


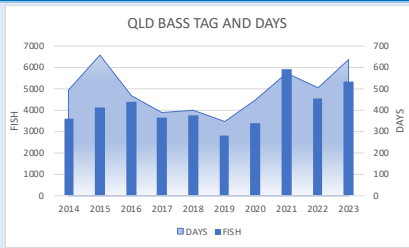
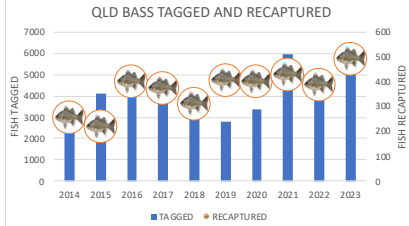
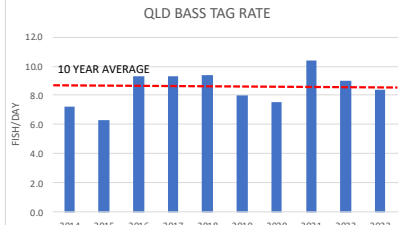
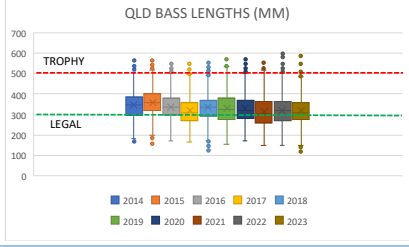
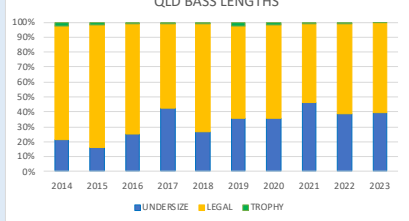
Barramundi

Tagged (red-orange
heatmap) (61,209)

Recaptured (blue dots)
(5,721)

2014-2023



BASS	ACTUAL			GRAPH or MAP																												
																																
DATA RELIABILITY																																
Sample size (fish/year)	<table><tr><td>Reliability level</td><td>LOW</td><td></td><td>MODERATE</td><td>MODERATE</td><td></td><td>HIGH</td></tr><tr><td>Samples</td><td>10</td><td>41</td><td>68</td><td>271</td><td>384</td><td>664</td></tr><tr><td>Confidence</td><td>80%</td><td>80%</td><td>90%</td><td>90%</td><td>95%</td><td>99%</td></tr><tr><td>Error</td><td>20%</td><td>10%</td><td>10%</td><td>5%</td><td>5%</td><td>5%</td></tr></table>				Reliability level	LOW		MODERATE	MODERATE		HIGH	Samples	10	41	68	271	384	664	Confidence	80%	80%	90%	90%	95%	99%	Error	20%	10%	10%	5%	5%	5%
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EFFORT																																
Catch and effort taggers	High	Low	Now																													
Tagged fish	Tagged																															
Tag days	2015	2019	2023																													
2014-2023	5944	2797	6090																													
	Days fished																															
	2015	2019	2023																													
	657	348	636																													
Fish tagged	Tagged		Recaptured																													
Recaptured	41656		3659																													
2014-2023	Recapture rate																															
	8.8%																															
TAG RATE																																
Tag rate	High	Low	Now																													
Fish/day	Tag rate																															
2014-2023	2021	2015	2023																													
	10.4	6.3	8.4																													
	10 year average		8.4																													
LENGTHS																																
Average length (mm)	High	Low	Now																													
Bars show length range	Average length																															
Dots show outliers	2015	2021	2023																													
2014-2023	358	314	318																													
	Max																															
	2022	2017	2023																													
	600	550	590																													
Species composition	High	Low	Now																													
Percentage tagged	Legal-trophy																															
2014-2023	2015	2021	2023																													
	82%	53%	59%																													
	Trophy																															
	2019	2022	2023																													
	3%	1%	0.3%																													

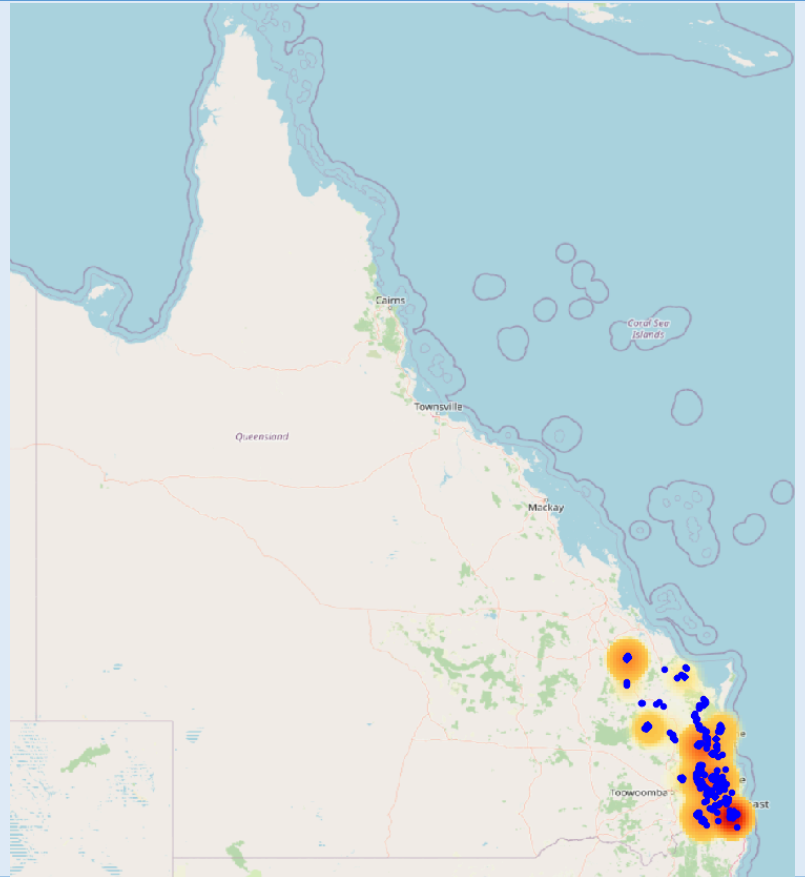
LOCATIONS




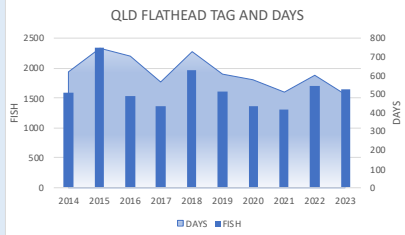
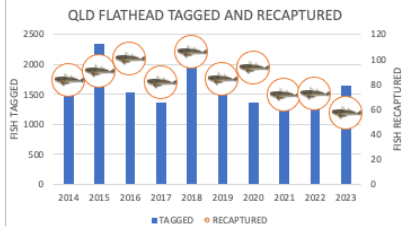
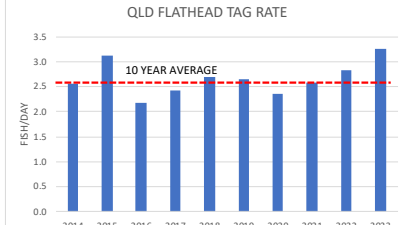
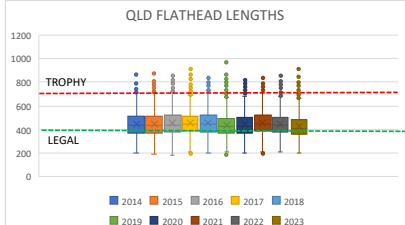
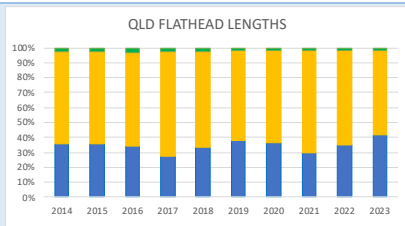
Bass

**Tagged (red-orange
heatmap) (41,656)**

**Recaptured (blue dots)
(3,659)**

2014-2023



FLATHEAD	ACTUAL			GRAPH or MAP																									
																													
DATA RELIABILITY																													
Sample size (fish/year)	<table><tr><td>Reliability level</td><td>LOW</td><td colspan="2">MODERATE</td><td>MODERATE</td><td>HIGH</td></tr><tr><td>Samples</td><td>10</td><td>41</td><td>68</td><td>271</td><td>664</td></tr><tr><td>Confidence</td><td>80%</td><td>80%</td><td>90%</td><td>90%</td><td>99%</td></tr><tr><td>Error</td><td>20%</td><td>10%</td><td>10%</td><td>5%</td><td>5%</td></tr></table>					Reliability level	LOW	MODERATE		MODERATE	HIGH	Samples	10	41	68	271	664	Confidence	80%	80%	90%	90%	99%	Error	20%	10%	10%	5%	5%
Reliability level	LOW	MODERATE		MODERATE	HIGH																								
Samples	10	41	68	271	664																								
Confidence	80%	80%	90%	90%	99%																								
Error	20%	10%	10%	5%	5%																								
Recaptured (blue arrow)																													
Tagged (orange arrow)																													
Confidence %																													
Error %																													
2019-2023																													
EFFORT																													
Catch and effort taggers	High	Low	Now																										
Tagged fish	Tagged																												
Tag days	2015	2021	2023																										
2014-2023	2335	1312	1644																										
	Days fished																												
	2015	2021	2023																										
	748	509	498																										
Fish tagged	Tagged		Recaptured																										
Recaptured	16430		837																										
2014-2023	Recapture rate																												
	5.1%																												
TAG RATE																													
Tag rate	High	Low	Now																										
Fish/day	Tag rate																												
2014-2023	2015	2016	2023																										
	3.1	2.2	3.3																										
	10 year average		2.7																										
LENGTHS																													
Average length (mm)	High	Low	Now																										
Bars show length range	Average length																												
Dots show outliers	2021	2020	2023																										
2014-2023	457	440	428																										
	Max																												
	2017	2020	2023																										
	910	840	910																										
Species composition	High	Low	Now																										
Percentage tagged	Legal-trophy																												
2014-2023	2017	2019	2023																										
	70%	60%	57%																										
	Trophy																												
	2017	2022	2023																										
	3%	2%	2%																										

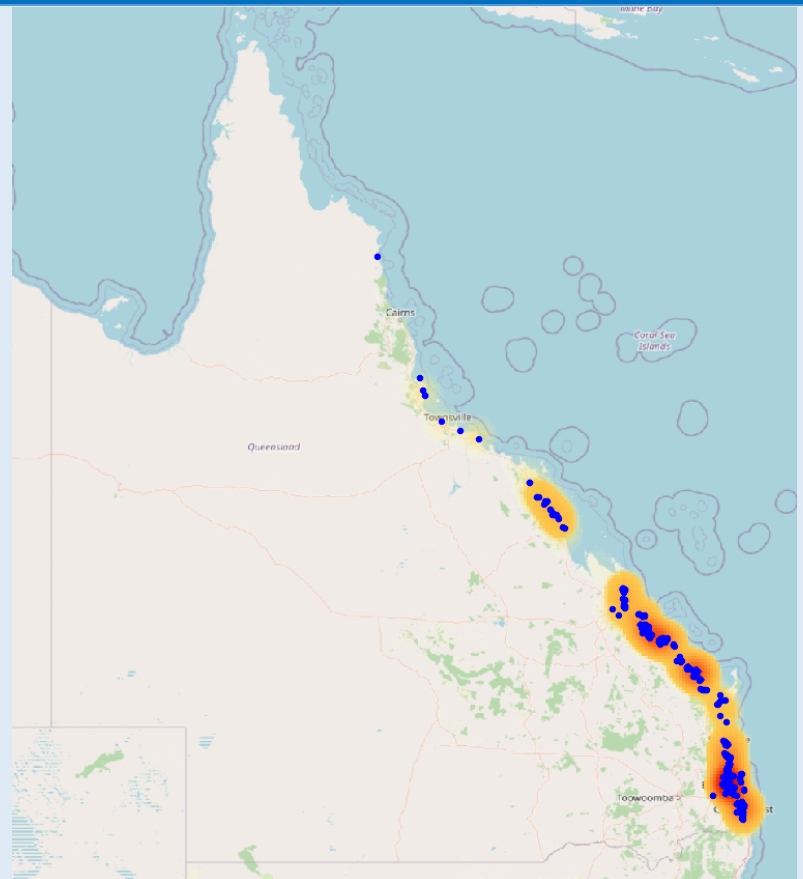
TAG LOCATIONS

Flathead

Tagged (red-orange
heatmap) (16,430)

Recaptured (blue dots)
(834)

2014-2023



Data sources

Data used in the Queensland Crystal Bowl are:

- Tag and recapture records for Queensland from Suntag records from Fishtag Australia database from http://crystalbowl.infofishaustralia.com.au/infofish/f_infofish.htm.
- Postcodes from Australia Post website at <https://auspost.com.au/postcode>.

Data analysis

- Data reliability for fishers based on the sample size over the past 5 years for days fished by taggers and by fishers recapturing fish.
- Data reliability for fish based on average number of fish tagged and recaptured per year over the past 5 years.
- Catch rates calculated as number of fish tagged/day for taggers with a minimum of 12 fisher days (at least 1 per month) to provide a reliable catch rate.
- For Barramundi undersized fish are <580mm, legal fish are ≥580 and <1000mm and trophy fish are ≥1000mm.
- For Australian Bass undersized fish are <300mm, legal fish are ≥300 and <500mm and trophy fish are ≥500mm.
- For Dusky Flathead undersized fish are <400mm, legal fish are ≥400 and <700mm and trophy fish are ≥700mm.
- Locations based on Infofish grid maps for Queensland.
- Distance from where fishers live to recapture location is the straight-line distance between locations based on Google Earth coordinates with Local <60, Intrastate ≥60 and Qld postcode, Interstate postcode other than Qld.