

BUNDABERG ESTUARIES REVIEW JUNE 2025

INFORMATION RATING



Key species: Dusky Flathead, Yellowfin Bream, Goldspotted Rockcod

Fish timeframe: 2016-2025 June

Fisher timeframe: 2021-2025 June

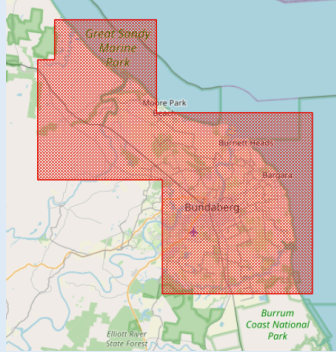
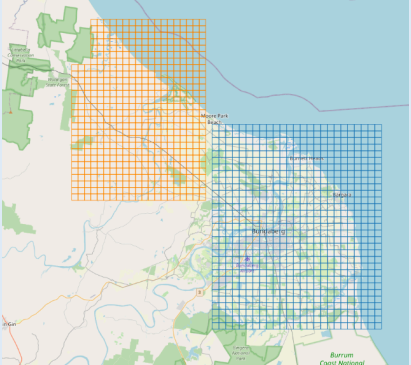
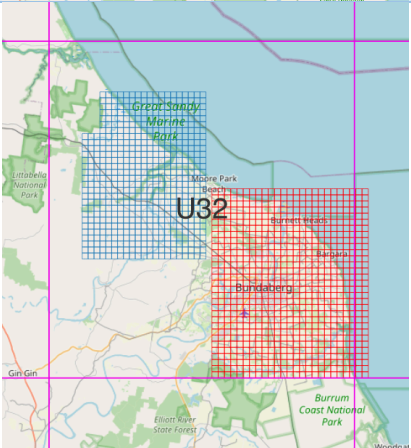
Bundaberg estuaries range from Littabella Creek in the north to Coonarr Creek in the south and include the Kolan River, Burnett River and Elliott River. The Burnett and Kolan Rivers are highly regulated with barrages that separate the tidal and freshwater reaches which limit the estuaries.

These estuaries are mostly fished by locals and fishers from Bundaberg and the immediate area catching mainly Flathead, Bream and Rockcod with those species accounting for 75% of fish tagged.

Activity by taggers and recapture fishers occurs throughout most of the year and trailer counts at key boat ramps indicate an increase in effort over late autumn and winter (this includes offshore trips). Most activity occurs on weekends for taggers and those recapturing fish and is supported by trailer counts at the key boat ramps.

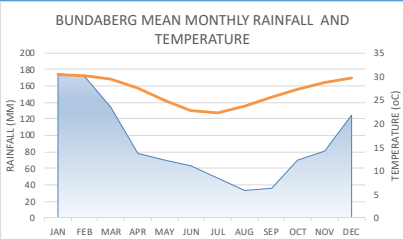
This is mainly a harvest fishery with a high retention rate of recaptured legal fish by recreational fishers (excluding taggers). For the key species the harvest rate of legal fish ranged from 58% for Rockcod to 74% for Flathead. Tag rates for the key species are up in 2025.

From 2019-2022 there were low flows resulting in reasonable conditions for fishing. Flows for much of 2022 made fishing conditions in the river very difficult resulting in restricted fishing activity and a consequent drop in the numbers of fish tagged and recaptured. The other rivers and creeks were also impacted however to a lesser extent. There has been a rebound in effort in 2023 and 2024 with more normal flows. There were high flow in early 2025 however the impact was less than in 2022.

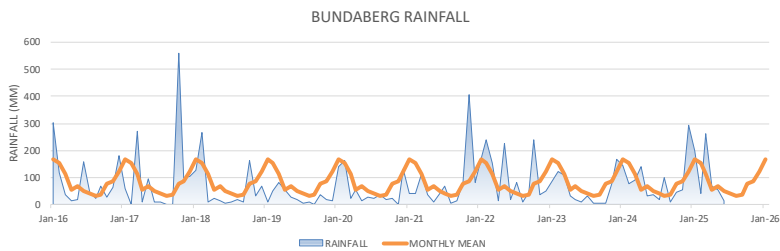
BUNDABERG ESTUARIES		LOCATION
	Bundaberg 24.87°S 152.35°E	
WATERWAYS	ACTUAL	GRAPH or MAP
Bundaberg Coast Grid maps Bundaberg (BND) Kolan River (KRB)	Burnett River Kolan River Littabella Creek Skyringville Elliott River Coonarr Creek	
Commercial QFISH Grid	Grid U32	

ENVIRONMENTAL

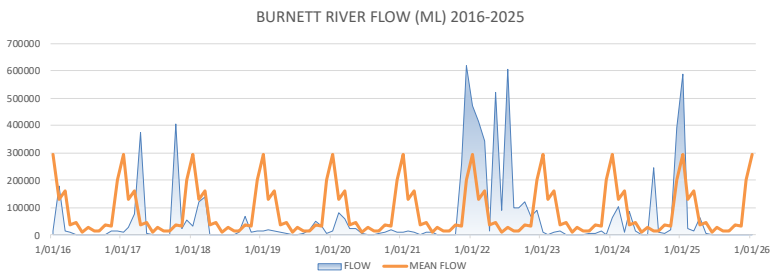
Mean monthly rainfall (mm)
Mean max temperature (oC)
All years



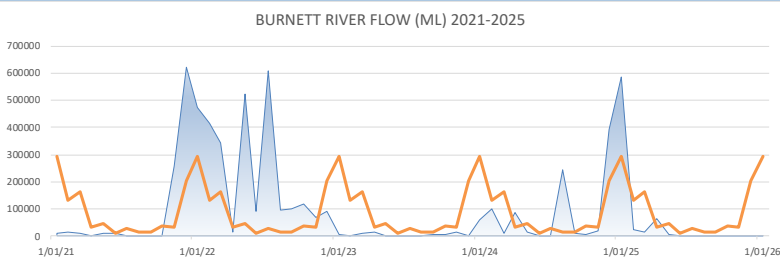
Bundaberg monthly rainfall (mm)
Mean monthly rainfall 2016-2025
2025 Jan-Jun



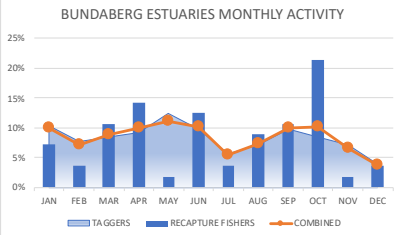
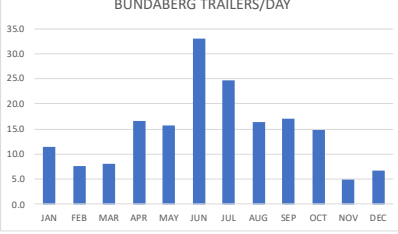
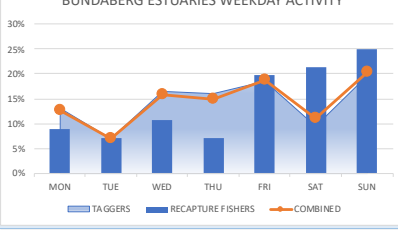
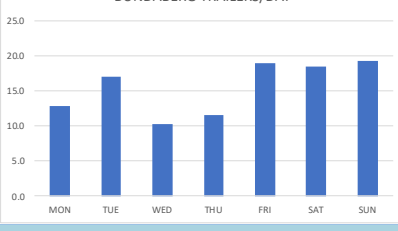
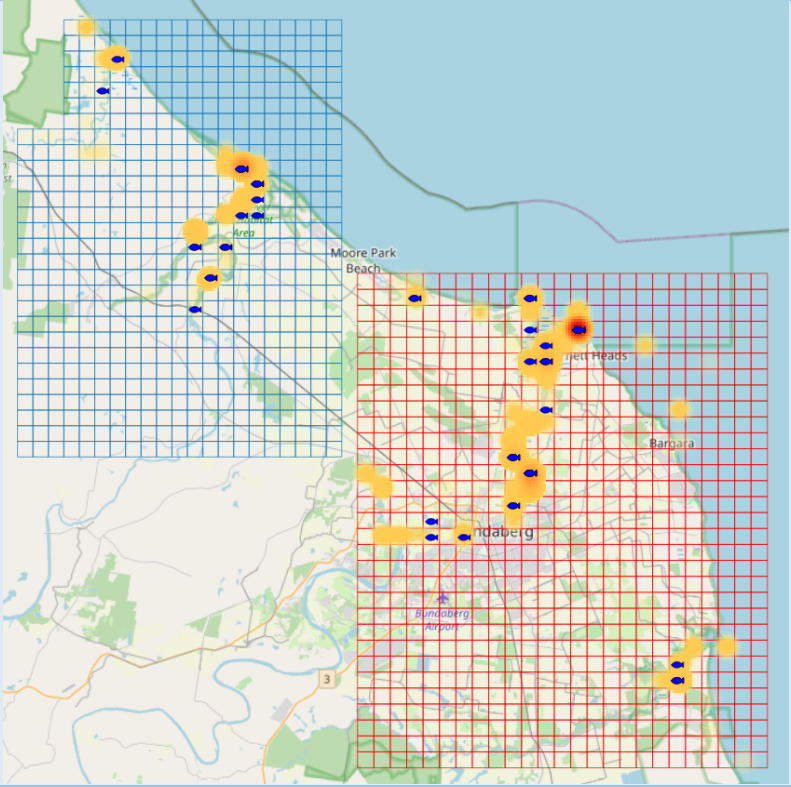
Burnett River monthly flows (ML)
Mean monthly flow 2016-2025
2025 Jan-Jun

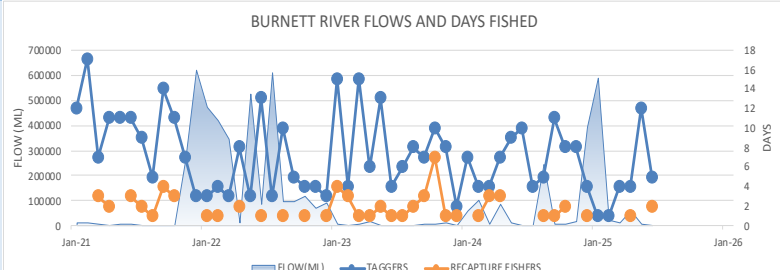
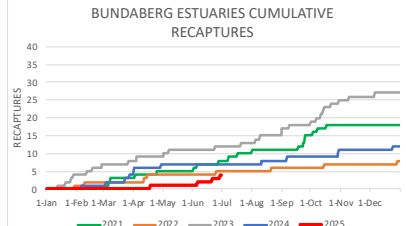


Burnett River flows (ML) 2021-2025
2025 Jan-Jun



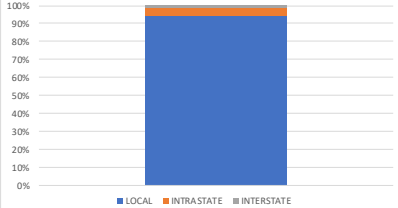
FISHERS		ACTUAL		GRAPH or MAP	
DATA RELIABILITY					
Sample size (days fished)		Reliability level		MODERATE	
Tag days (blue arrow)		Samples		MODERATE	
Recaptures (orange arrow)		Confidence		HIGH	
Confidence %		Error			
Error %					
2021-2025					

ACTIVITY			
Monthly activity Days fished Taggers (389) Recapture fishers (56) 2021-2025 2025 Jan-Jun	Taggers	Month	%
		May	12%
		Jun	10%
	Recaps	Oct	21%
		Apr	14%
			
Monthly activity Trailers at 5 key boat ramps Burnett River and offshore Kolan River 2021-2025 2025 Jan-Jun	Count days		206
	Trailers		3195
	Trailers/day		
	Jun		33
	Jul		24
			
Weekday activity Days fished Taggers (389) Recapture fishers (56) 2021-2025 2025 Jan-Jun	Taggers	Day	%
		Weekend	29%
		Weekdays	71%
	Recaps	Weekend	46%
		Weekdays	54%
			
Trailer counts at 5 key boat ramps Burnett River and offshore Kolan River 2021-2025 2025 Jan-Jun	Count days		206
	Trailers		3119
	Trailers/day		
	Fri		19
	Sat		18
			
Location activity Tagged fish (red-orange heat map) (1651) Recapture fishers (blue fish) (69) 2021-2025 2025 Jan-Jun			

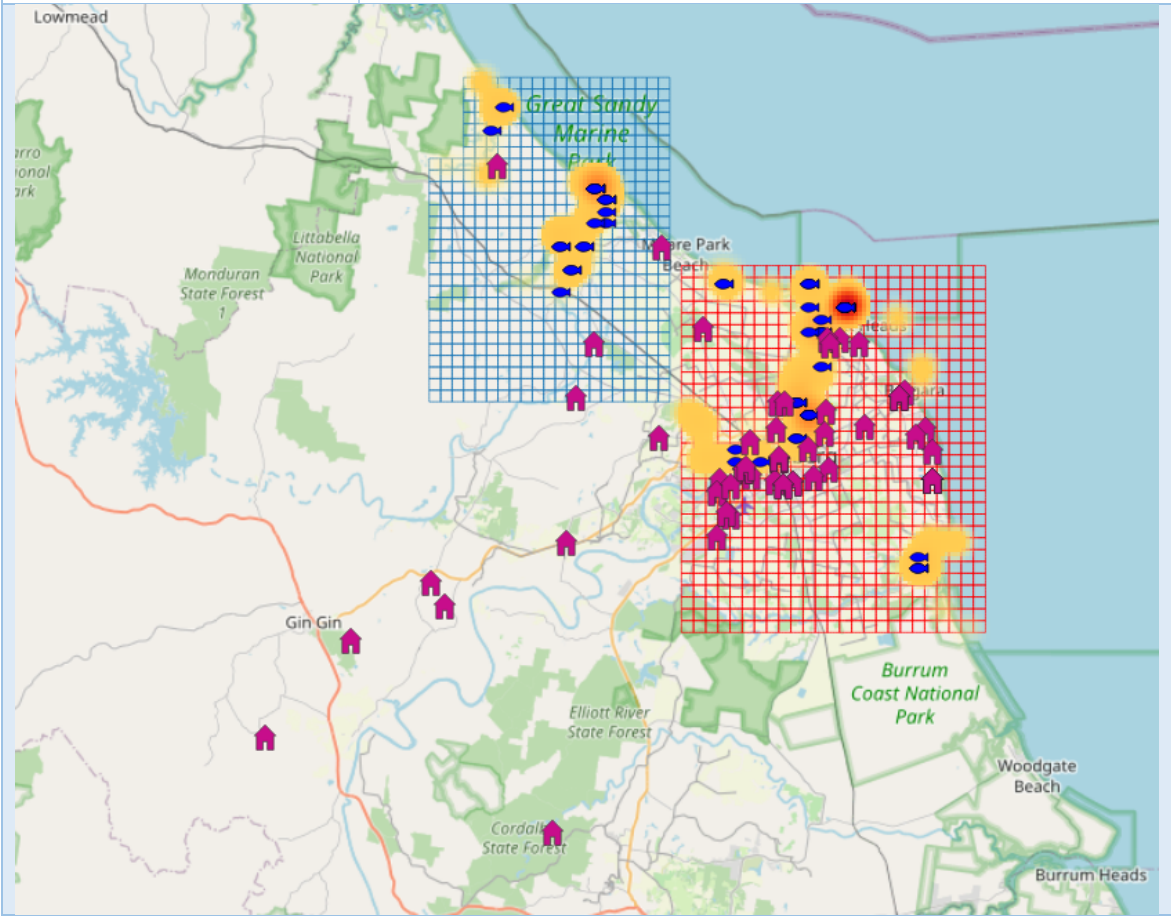
EFFORT														
Fisher effort Burnett River flow (ML) Days fished Taggers (blue dots) Recapture fishers (orange dots) 2021-2025 2025 Jan-Jun	BURNETT RIVER FLOWS AND DAYS FISHED 													
Cumulative recaptures 2021-2025 2025 Jan-Jun	<table><thead><tr><th>Year</th><th>Recaps</th></tr></thead><tbody><tr><td>2021</td><td>18</td></tr><tr><td>2022</td><td>8</td></tr><tr><td>2023</td><td>27</td></tr><tr><td>2024</td><td>12</td></tr><tr><td>2025 Jan-Jun</td><td>4</td></tr></tbody></table>	Year	Recaps	2021	18	2022	8	2023	27	2024	12	2025 Jan-Jun	4	BUNDABERG ESTUARIES CUMULATIVE RECAPTURES 
Year	Recaps													
2021	18													
2022	8													
2023	27													
2024	12													
2025 Jan-Jun	4													

TRAVEL		
Cumulative distance (km) home to recapture location (ex-interstate) 2021-2025 2025 Jan-Jun	Year	Km
	2021	368
	2022	457
	2023	578
	2024	207
2025 Jan-Jun	63	
Distance (km) home to recapture location (ex-interstate) 2021-2025 2025 Jan-Jun		
Average distance (km) from home to recapture location 2021-2025 2025 Jan-Jun	Av distance (km)	
	Local	16
	Intrastate	209
2025 Jan-Jun	Interstate	1549
Distance (km) home to recapture location Bars show distance range Dots show outliers 2021-2025 2025 Jan-Jun	Range (km)	
	Local	1-52
	Intrastate	82-325
	Interstate	1549

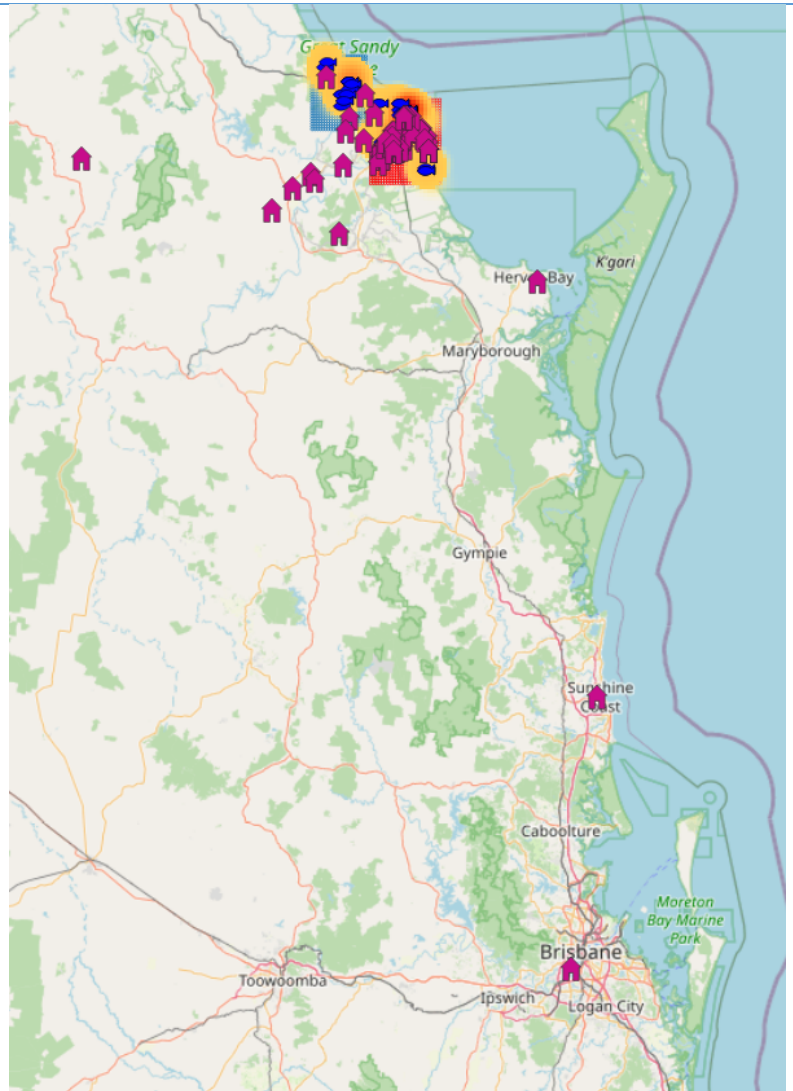
WHERE RECAPTURE FISHERS LIVE

Where recapture fishers live 2021-2025 2025 Jan-Jun	Recapture fishers	68	WHERE RECAPTURE FISHERS LIVE 
	Local	64 (94%)	
	Intrastate	3 (4%)	
	Interstate	1 (1%)	

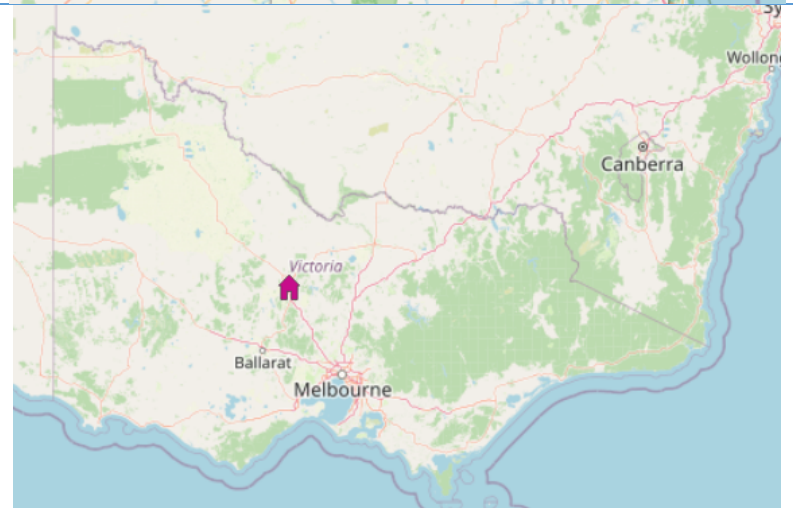
Where fishers recapturing fish live (purple houses) Local 2021-2025 2025 Jan-Jun	
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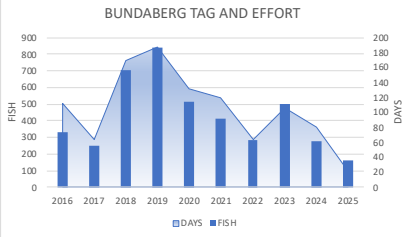
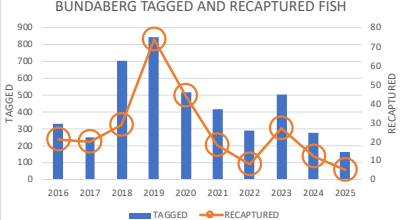
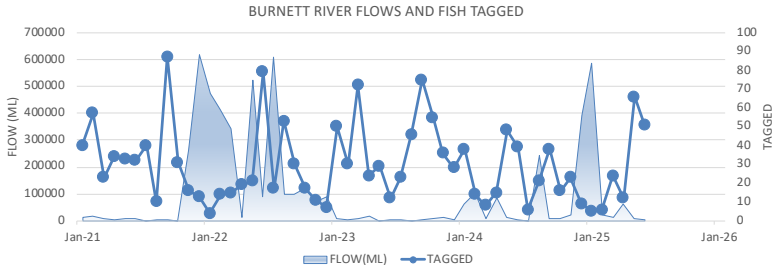
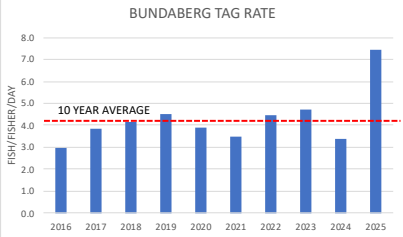


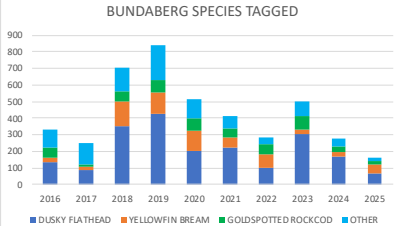
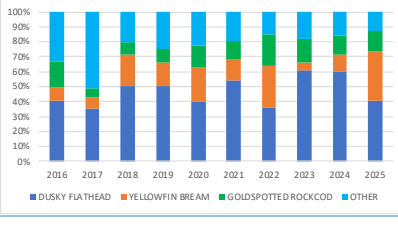
**Where fishers recapturing
fish live (purple houses)**
Local
Intrastate
2021-2025
2025 Jan-Jun

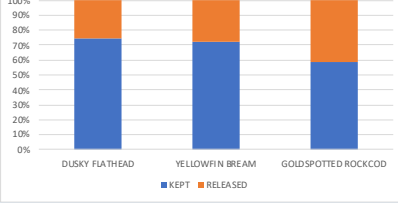


**Where fishers recapturing
fish live (purple houses)**
Interstate
2021-2025
2025 Jan-Jun



FISH	ACTUAL			GRAPH or MAP
DUSKY FLATHEAD	YELLOWFIN BREAM			GOLDSPOTTED ROCKCOD
				
EFFORT				
Catch and effort taggers Tagged fish (4281) Days fished (1056) 2016-2025 2025 Jan-Jun	High Tagged fish 2019 841 Days 2019 187	Low 2017 247 2022 64	Now 2025 164 2025 22	
Tagged fish Recaptured 2016-2025 2025 Jan-Jun	Tagged Recaptured Recapture rate 6.0%	4281 258		
Burnett River flow Fish tagged each month 2021-2025 2025 Jan-Jun				
Tag rate All tagged fish Fish/day 2016-2025 2025 Jan-Jun	High Tag rate 2023 4.7 10 year average	Low 2016 3.0	Now 2025 7.5 4.1	

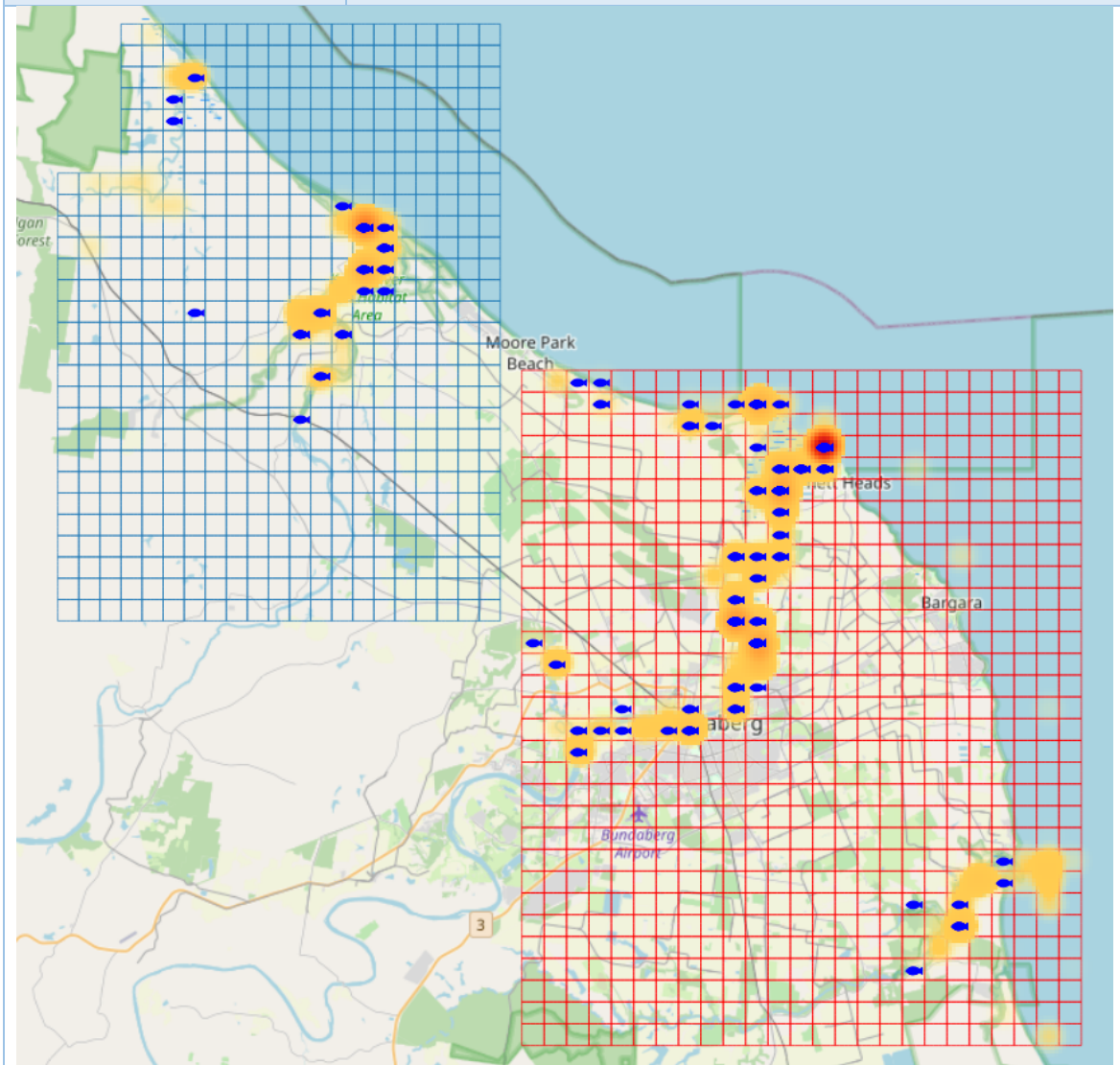
SPECIES			
Species composition Numbers tagged 2016-2025 2025 Jan-Jun	Dusky Flathead	2072	
	Yellowfin Bream	693	
	Goldspotted Rockcod	534	
	Other species	982	
Species composition Percentage tagged 2016-2025 2025 Jan-Jun	Dusky Flathead	48%	
	Yellowfin Bream	16%	
	Goldspotted Rockcod	12%	
	Combined	77%	

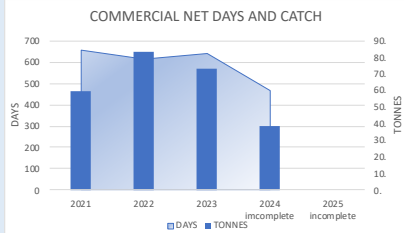
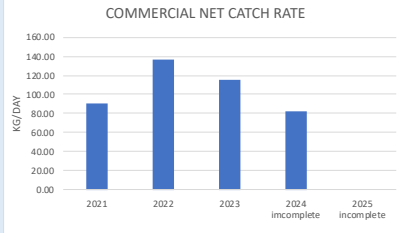
FATE			
Legal recaptures kept or released by recfishers (ex-taggers) 2016-2025 2025 Jan-Jun		Legal	Kept
	Flathead	58	43 (74%)
	Bream	18	13 (72%)
	Rockcod	24	14 (58%)
			

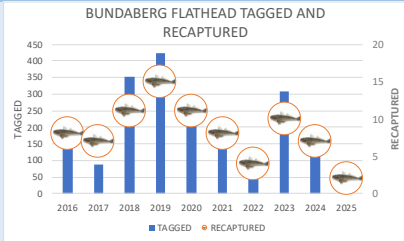
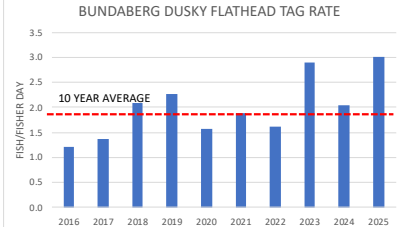
LOCATIONS

All fish
Tagged (red-orange heat
map)
Recaptures (blue fish)
2016-2025
2025 Jan-Jun

Tagged (4281)
Recaptures (258)



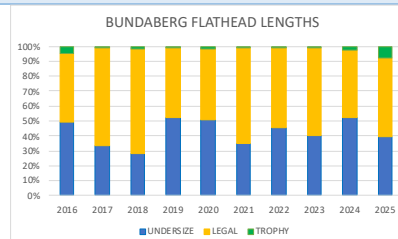
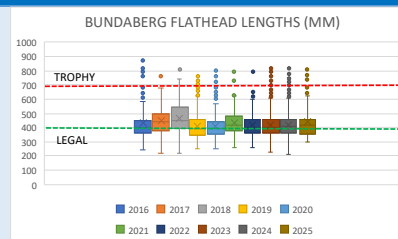
COMMERCIAL EFFORT			
Commercial effort and catch	Year	Days	Catch
Net fishery (all)	2021	658	59.3
Grid U32	2022	612	83.4
Days	2023	638	73.4
Catch (tonnes)	2024*	465	38.4
2021-2025	2025*	NA	NA
	*incomplete		
			
COMMERCIAL CATCH RATE			
Commercial catch rate	Year	Kg/day	
Net fishery (all)	2021	90.2	
Grid U32	2022	136.3	
Kg/day	2023	115.0	
2021-2025	2024*	90.0	
	2025*	NA	
	*incomplete		
			

FLATHEAD		ACTUAL		GRAPH or MAP																																		
																																						
DATA RELIABILITY																																						
Sample size (av fish/year)																																						
Tagged (blue arrow)																																						
Recaptures (orange arrow)																																						
Confidence %																																						
Error %																																						
2021-2025																																						
		<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></tr><tr><td>Confidence</td><td>80%</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><td></td></tr></table>				Reliability level	LOW		MODERATE		MODERATE		HIGH		Samples	10	41	68	271	384	664		Confidence	80%	80%	80%	90%	90%	95%	99%	Error	20%	10%	10%	5%	5%	5%	
Reliability level	LOW		MODERATE		MODERATE		HIGH																															
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TAGGED AND TAG RATE																																						
Flathead		High	Low	Now																																		
Tagged (2072)		Tagged																																				
Recaptured (83)		2019	2017	2025																																		
2016-2025		423	87	66																																		
2025 Jan-Jun		Recapture rate																																				
		4.0%																																				
																																						
Tag rate		High	Low	Now																																		
Fish/day		Tag rate																																				
2016-2025		2023	2016	2025																																		
2025 Jan-Jun		2.9	1.2	3.0																																		
		10 year average		1.8																																		
																																						

LENGTHS

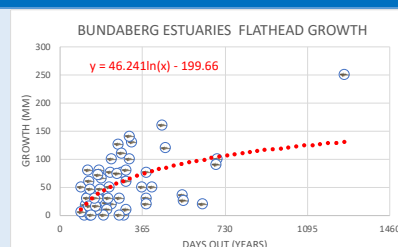
Average length (mm)	High	Low	Now
Bars show length range	Average length		
Dots show outliers	2018	2020	2025
2016-2025	466	410	439
2025 Jan-Jun	Max		
	2016	2019	2025
	870	760	810

Fish lengths percentage	High	Low	Now
Undersize <400mm	Legal-Trophy		
Legal 400-700mm	2018	2024	2025
Trophy 700+mm	70%	45%	53%
2016-2025	Trophy		
2025 Jan-Jun	2016	2023	2025
	4%	1%	8%



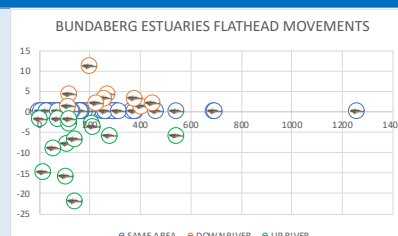
GROWTH

Flathead growth at the end of each year based on recaptures of fish tagged	Recaptures	60
2016-2025	Growth (mm)	
2025 Jan-Jun	Year 1	73
	Year 2	105
	Year 3	124
	Year 4	137
	Year 5	147



MOVEMENT

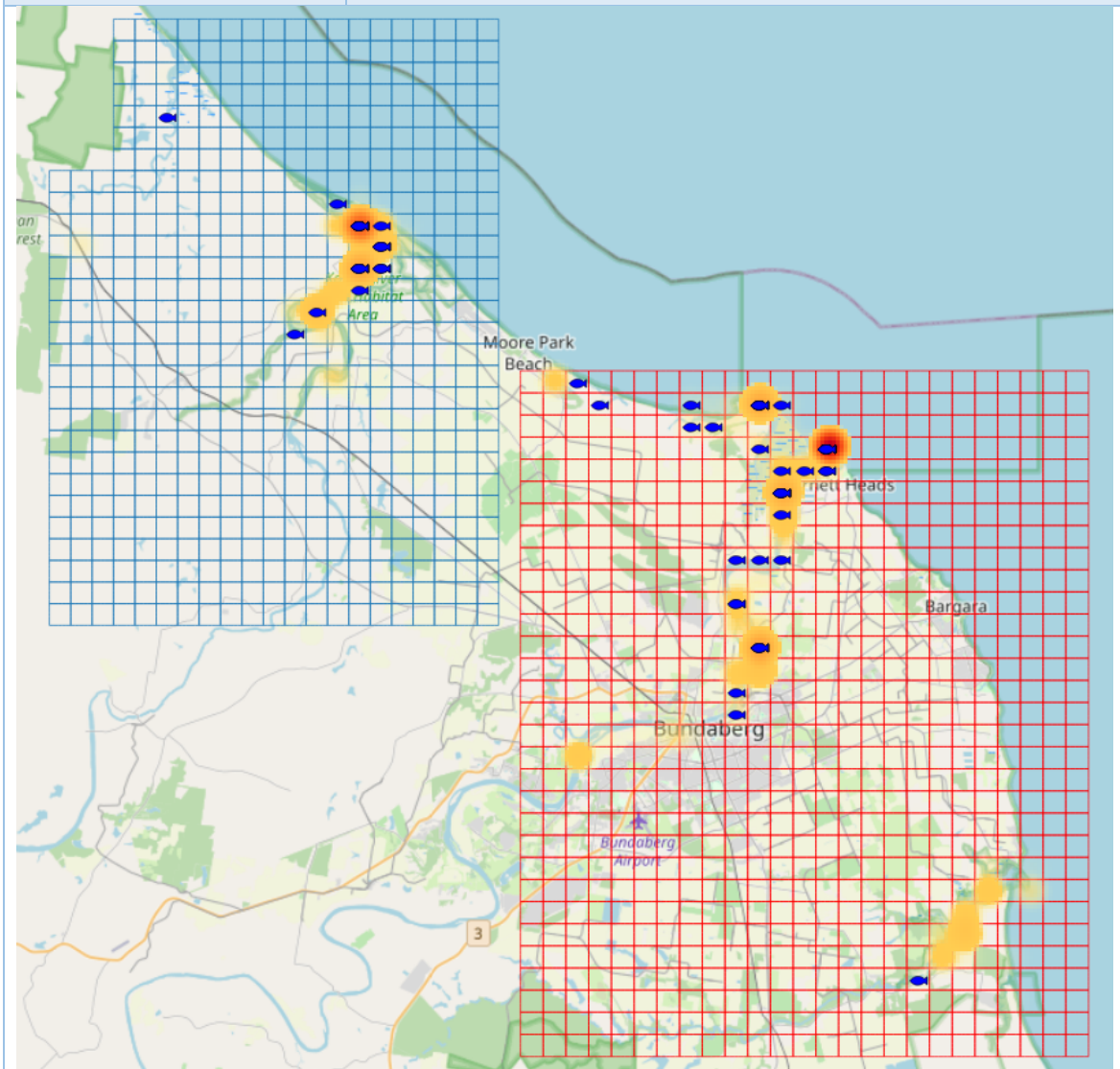
Flathead movement	Recaptures	86
Distance moved (km)	Same area	58 (67%)
2016-2025	Down river	9 (10%)
2025 Jan-Jun	Up river	14 (16%)
	Outside river	5 (6%)



LOCATIONS

Flathead
Tagged (red-orange heat
map)
Recaptured (blue fish)
2016-2025
2025 Jan-Jun

Tagged (2072)
Recaptured (83)



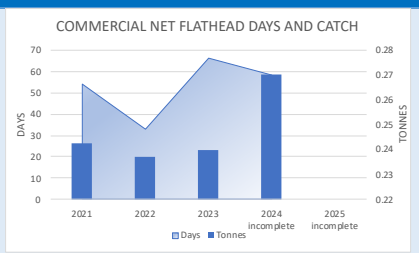
COMMERCIAL EFFORT

Commercial effort and catch	Year	Days	Catch
Net fishery (Flathead)	2021	54	0.24
Grid U32	2022	33	0.24
Days	2023	66	0.24
Catch (tonnes)	2024*	58	0.27
2021-2025	2025*	NA	NA
	*incomplete		

COMMERCIAL NET FLATHEAD DAYS AND CATCH

The chart displays two data series from 2021 to 2025. The left Y-axis represents 'DAYS' (0 to 70), and the right Y-axis represents 'TONNES' (0.22 to 0.28). The X-axis shows the years 2021, 2022, 2023, 2024, and 2025. 'DAYS' is shown as a blue area chart, and 'TONNES' is shown as blue bars. Data for 2025 is marked as 'incomplete'.

Year	Days	Tonnes
2021	54	0.24
2022	33	0.24
2023	66	0.24
2024	58	0.27
2025	NA	NA

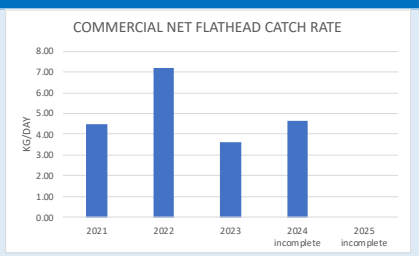


COMMERCIAL CATCH RATE

Commercial catch rate Net fishery (Flathead) Grid U32 Kg/day 2021-2025	Year	Kg/day
	2021	4.5
	2022	7.2
	2023	3.6
	2024*	4.7
	2025*	NA
	*incomplete	

COMMERCIAL NET FLATHEAD CATCH RATE

Year	Kg/day
2021	4.5
2022	7.2
2023	3.6
2024	4.7
2025	NA



BREAM	ACTUAL	GRAPH or MAP
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ACTUAL	GRAPH or MAP
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GRAPH or MAP



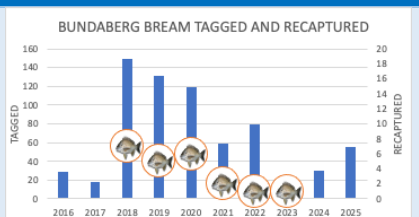
DATA RELIABILITY		
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Reliability level	LOW		MODERATE		MODERATE		HIGH
Samples	10	41	68	271	384	664	
Confidence	80%	80%	90%	90%	95%	99%	
Error	20%	10%	10%	5%	5%	5%	

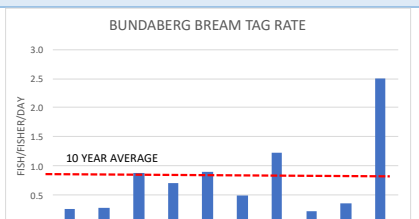
TAGGED AND TAG RATE	
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Bream	High	Low	Now
Tagged (693)	Tagged		
Recaptured (22)	2018	2017	2025
2016-2025	149	18	55
2025 Jan-Jun	Recapture rate		
	3.2%		

Year	Tagged	Recaptured
2016	30	0
2017	15	0
2018	150	7
2019	130	7
2020	120	7
2021	60	3
2022	80	3
2023	20	3
2024	30	0
2025	55	0



Tag rate	High	Low	Now	BUNDABERG BREEM TAG RATE <table><caption>Estimated data for Bundaberg Bream Tag Rate</caption><thead><tr><th>Year</th><th>Fish/Fisher/Day</th></tr></thead><tbody><tr><td>2016</td><td>0.3</td></tr><tr><td>2017</td><td>0.3</td></tr><tr><td>2018</td><td>0.8</td></tr><tr><td>2019</td><td>0.7</td></tr><tr><td>2020</td><td>0.9</td></tr><tr><td>2021</td><td>0.5</td></tr><tr><td>2022</td><td>1.2</td></tr><tr><td>2023</td><td>0.2</td></tr><tr><td>2024</td><td>0.4</td></tr><tr><td>2025</td><td>2.5</td></tr></tbody></table>	Year	Fish/Fisher/Day	2016	0.3	2017	0.3	2018	0.8	2019	0.7	2020	0.9	2021	0.5	2022	1.2	2023	0.2	2024	0.4	2025	2.5
Year	Fish/Fisher/Day																									
2016	0.3																									
2017	0.3																									
2018	0.8																									
2019	0.7																									
2020	0.9																									
2021	0.5																									
2022	1.2																									
2023	0.2																									
2024	0.4																									
2025	2.5																									
Bream	Tag rate																									
Fish/day	2020	2023	2025																							
2016-2025	0.9	0.2	2.5																							
2025 Jan-Jun	10 year average		0.8																							

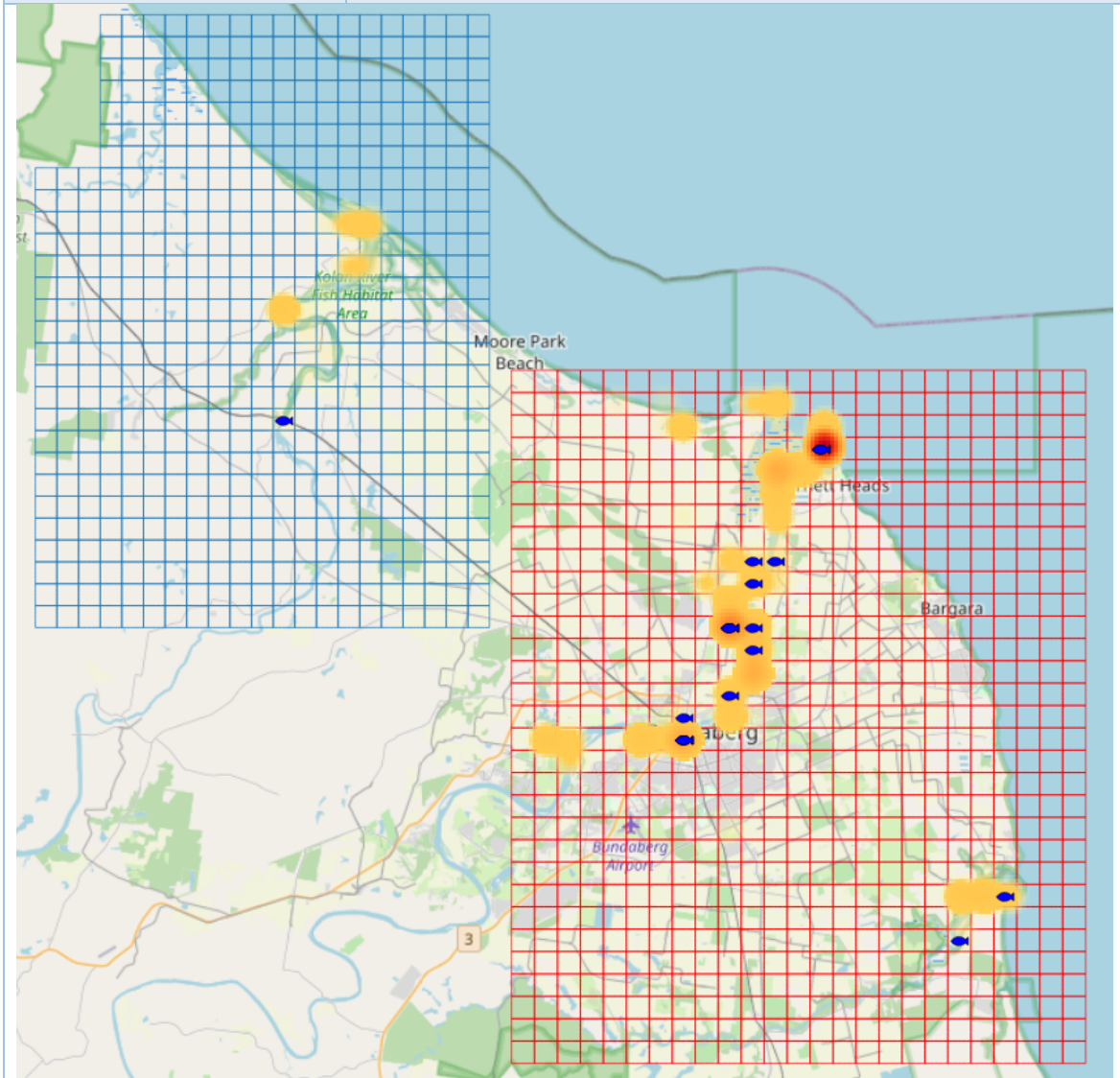


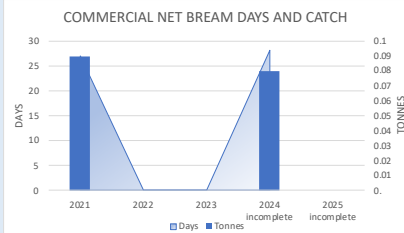
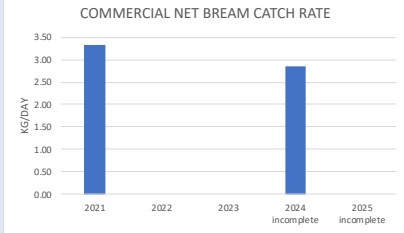
LENGTHS				
Average length (mm) Bars show length range Dots show outliers 2016-2025 2025 Jan-Jun	High	Low	Now	
	Average length			
	2024	2019	2025	
	303	271	291	
	Max			
Fish lengths percentage Undersize <250mm Legal 250-400mm Trophy 400+mm 2016-2025 2025 Jan-Jun	High	Low	Now	
	Legal-Trophy			
	2016	2022	2025	
	97%	61%	82%	
	Trophy			
2025 Jan-Jun	2022	2023	2025	
	4%	0%	4%	
MOVEMENT				
Bream movement Distance moved (km) 2016-2025 2025 Jan-Jun	Recaptures	41		
	Same area	21 (51%)		
	Down river	4 (10%)		
	Up river	16 (39%)		
	Outside river	0		

LOCATIONS

Bream
Tagged (red-orange heat map)
Recaptured (blue fish)
2016-2025
2025 Jan-Jun

Tagged (693)
Recaptured (22)



COMMERCIAL EFFORT																					
Commercial effort and catch	Year	Days	Catch																		
Net fishery (Bream)	2021	27	0.09																		
Grid U32	2022	NA	NA																		
Days	2023	NA	NA																		
Catch (tonnes)	2024*	28	0.08																		
2021-2025	2025*	NA	NA																		
	*incomplete																				
																					
COMMERCIAL NET BREAM DAYS AND CATCH																					
The chart displays two data series: Days (blue bars) and Tonnes (blue line with markers). The left Y-axis represents Days (0 to 30), and the right Y-axis represents Tonnes (0.01 to 0.1). The X-axis shows years from 2021 to 2025, with 2024 marked as 'incomplete' and 2025 as 'incomplete'.																					
<table border="1"><thead><tr><th>Year</th><th>Days</th><th>Tonnes</th></tr></thead><tbody><tr><td>2021</td><td>27</td><td>0.09</td></tr><tr><td>2022</td><td>NA</td><td>NA</td></tr><tr><td>2023</td><td>NA</td><td>NA</td></tr><tr><td>2024</td><td>28</td><td>0.08</td></tr><tr><td>2025</td><td>NA</td><td>NA</td></tr></tbody></table>				Year	Days	Tonnes	2021	27	0.09	2022	NA	NA	2023	NA	NA	2024	28	0.08	2025	NA	NA
Year	Days	Tonnes																			
2021	27	0.09																			
2022	NA	NA																			
2023	NA	NA																			
2024	28	0.08																			
2025	NA	NA																			
COMMERCIAL CATCH RATE																					
Commercial catch rate	Year	Kg/day																			
Net fishery (Bream)	2021	3.3																			
Grid U32	2022	NA																			
Kg/day	2023	NA																			
2021-2025	2024*	2.3																			
	2025*	NA																			
	*incomplete																				
																					
COMMERCIAL NET BREAM CATCH RATE																					
The chart displays the catch rate in Kg/day (blue bars). The Y-axis represents Kg/day (0.00 to 3.50). The X-axis shows years from 2021 to 2025, with 2024 marked as 'incomplete' and 2025 as 'incomplete'.																					
<table border="1"><thead><tr><th>Year</th><th>Kg/day</th></tr></thead><tbody><tr><td>2021</td><td>3.3</td></tr><tr><td>2022</td><td>NA</td></tr><tr><td>2023</td><td>NA</td></tr><tr><td>2024</td><td>2.3</td></tr><tr><td>2025</td><td>NA</td></tr></tbody></table>				Year	Kg/day	2021	3.3	2022	NA	2023	NA	2024	2.3	2025	NA						
Year	Kg/day																				
2021	3.3																				
2022	NA																				
2023	NA																				
2024	2.3																				
2025	NA																				

ROCKCOD		ACTUAL		GRAPH or MAP	
					
DATA RELIABILITY					
Sample size (av fish/year)		Reliability level		MODERATE	
Tagged (blue arrow)		Samples		MODERATE	
Recaptures (orange arrow)		Confidence		HIGH	
Confidence %		Error			
Error %					
2021-2025					

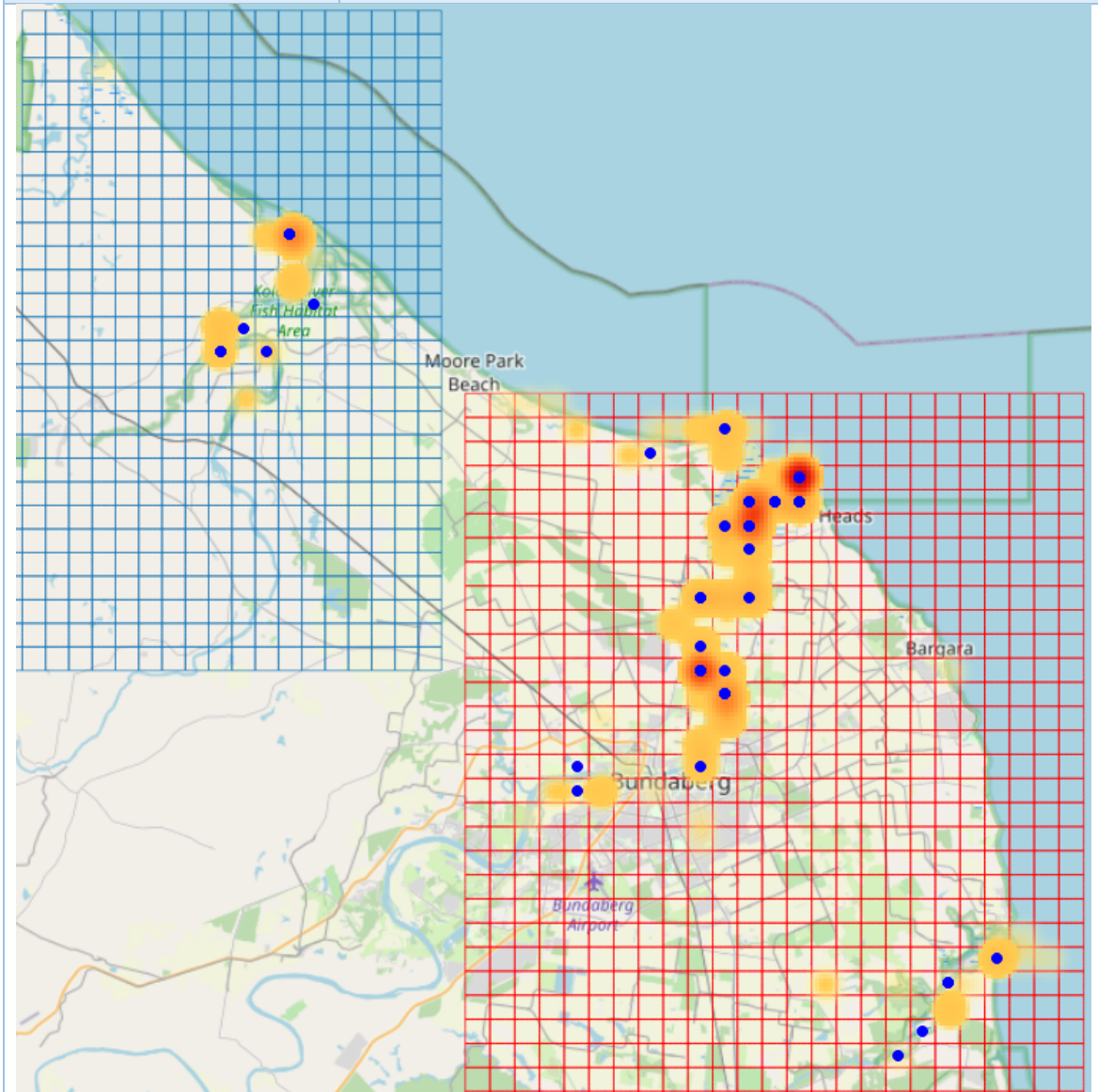
LENGTHS				
Average length (mm) Bars show length range Dots show outliers 2016-2025 2025 Jan-Jun	High	Low	Now	
	Average length			
	2020	2016	2025	
	321	289	335	
	Max			
	2020	2017	2025	
	500	380	400	
Fish lengths percentage Undersize <400mm Legal 400-600mm Trophy 600+mm 2016-2025 2025 Jan-Jun	High	Low	Now	
	Legal -Trophy			
	2020	2022	2025	
	15%	6%	14%	
	Trophy			
	No trophy length fish any year			

MOVEMENT				
Rockcod movement 2016-2025 2025 Jan-Jun	Recaptures	83	BUNDABERG ESTUARIES ROCKCOD MOVEMENTS MOVED (KM) DAYS OUT (YEARS) ● SAME AREA ● DOWN RIVER ● UP RIVER	
	Same area	73(88%)		
	Down river	7 (9%)		
	Up river	3 (4%)		
	Outside river	0		

LOCATIONS

Rockcod
Tagged (red-orange heat
map)
Recaptured (blue fish)
2016-2025
2025 Jan-Jun

Tagged (534)
Recaptured (80)



Data sources

Data used in the Bundaberg estuaries Crystal Bowl are:

- Tag records and recapture records for the river at <http://crystalbowl.infofishaustralia.com.au/>.
- Boat ramp trailer count from Infofish surveys at Burnett Heads (includes offshore trips), Bundaberg city, Kirby, Strathdees on Burnett River and Miara on Kolan River. Counts from mid-morning to mid-afternoon.
- River flow records for Burnett River at Stn 136007A at Figtree Creek from <https://water-monitoring.information.qld.gov.au/>.
- Rainfall and temperature records for Bundaberg at Bundaberg Aero station 039128 from <http://www.bom.gov.au/climate/data/>.

Basis for 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 days (at least 1 per month) to provide an acceptable catch rate.
- For Dusky Flathead undersized fish are <400mm, legal fish are ≥400 and <700mm and trophy fish are ≥700mm.
- For Yellowfin Bream undersized fish are <250mm, legal fish are ≥250mm and <400mm and trophy fish are ≥400mm.
- For Goldspotted Rockcod undersized fish are <380mm, legal fish are ≥380mm and <600 and trophy fish are ≥600mm.
- Growth calculated using logarithmic curve from recaptures where fish were out for 90 days or more and had positive growth.
- Locations based on Infofish grid map BND and KRB for the estuaries and other grid maps where fish were recaptured outside the river.
- Movement distance calculated as the shortest distance by water from the tag to the recapture location using Google Earth.
- Distance from fisher's address to recapture location is the straight-line distance between locations based on Google Earth coordinates with Local <60km, Intrastate ≥60km and Qld postcodes, Interstate postcodes other than Qld.