



BUNDABERG ESTUARIES REVIEW 2025

INFORMATION RATING



Key species: Dusky Flathead, Yellowfin Bream, Goldspotted Rockcod

Fish timeframe: 2016-2025

Fisher timeframe: 2021-2025

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Supported by Suntag, Gladstone Ports Corporation, and
Department of Primary Industries

BUNDABERG ESTUARIES OVERVIEW

Summary of 2025

- Bundaberg estuaries remain mostly a local and primarily a harvest fishery.
- Tagging effort has remained steady and the reliability of the data remains high.
- Trailer counts at key boat ramps continue to provide additional data on fishing activity.

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.

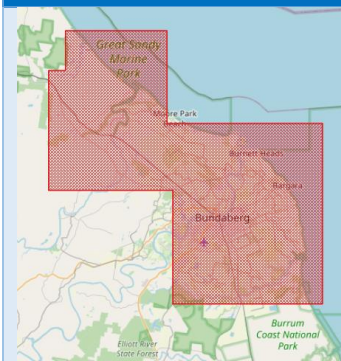
These estuaries are mostly fished by locals and fishers from Bundaberg and the immediate area catching mainly Flathead, Bream and Rockcod with those species accounting for 75% of fish tagged.

Activity by taggers and recapture fishers occurs throughout most of the year. Trailer counts at key boat ramps provide additional information on monthly and weekday activity. Burnett Heads boat ramp is primarily used for offshore fishing, particularly over the winter months when wind conditions are more favourable. Most activity occurs on weekends for taggers and those recapturing fish and is supported by trailer counts at the key boat ramps.

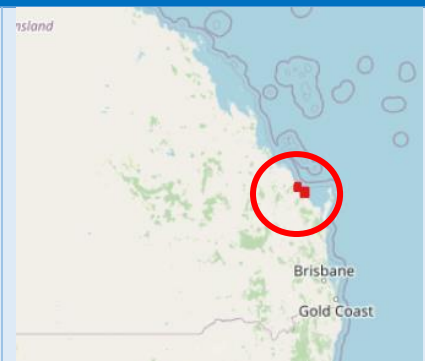
This is mainly a harvest fishery with a high retention rate of recaptured legal fish by recreational fishers (excluding taggers). For the key species the harvest rate of legal fish ranged from 56% for Rockcod to 75% for Flathead.

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 was a rebound in effort in 2023 and has remained steady since then. There were high flow in early 2025 however the impact was less than in 2022.

BUNDABERG ESTUARIES LOCATION



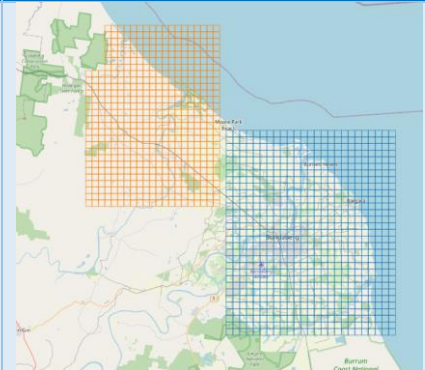
Bundaberg
24.87°S
152.35°E



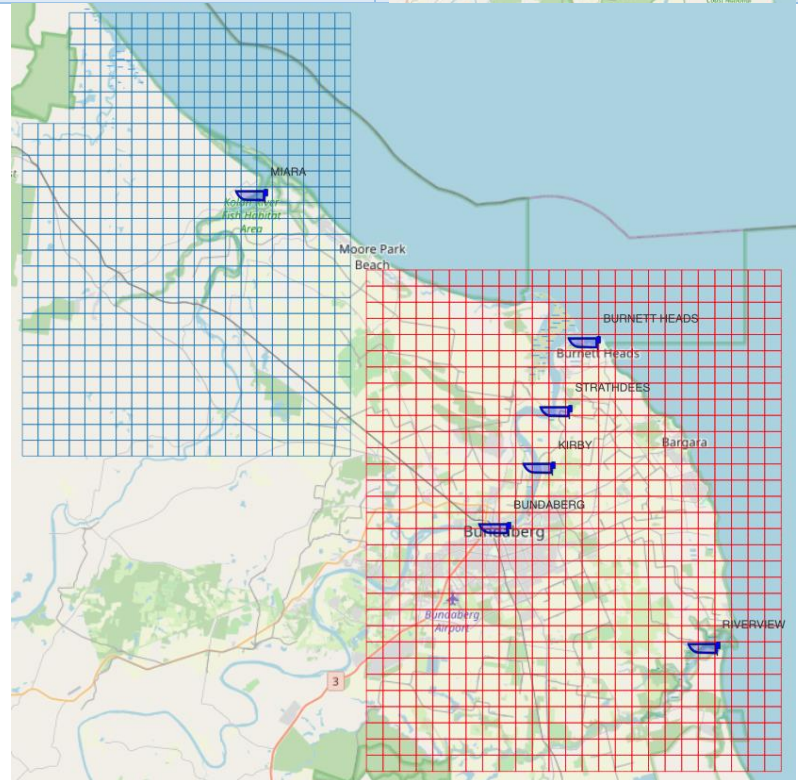
WATERWAYS

Bundaberg Coast
Grid maps
Bundaberg (BND)
Kolan River (KRB)

Burnett River
Kolan River
Littabella Creek
Skyringville
Elliott River
Coonarr Creek

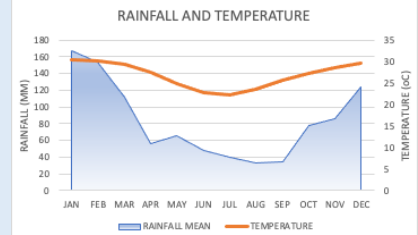


Boat ramps
Miara
Burnett Heads
Strathdees
Kirby
Bundaberg
Riverview

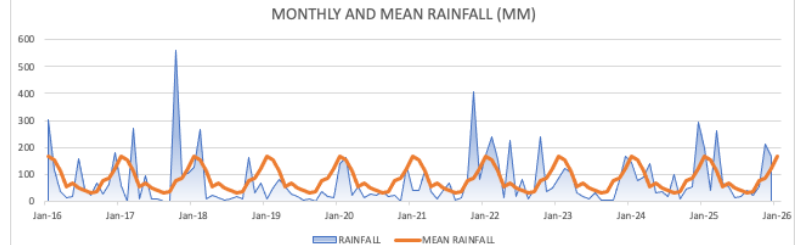


ENVIRONMENTAL CONDITIONS

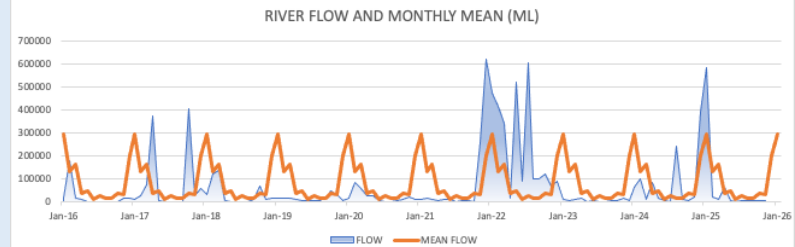
Mean monthly rainfall
(mm)
Mean max temperature
(oC)
All years



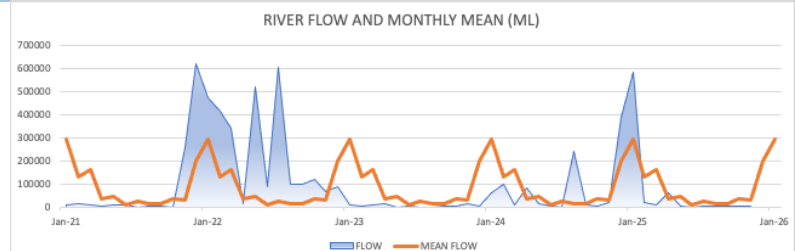
Bundaberg monthly
rainfall (mm)
Mean monthly rainfall
2016-2025



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



Burnett River flows (ML)
2021-2025



TYPE OF FISHERY		
DATA RELIABILITY		
Sample size (days fished)		
Tag days (blue arrow)		
Recaptures (orange arrow)		
Confidence %		
Error %		
2021-2025		
Fishing conditions	Days	526
Average rainfall (mm)	Months most	
Days fished combined	Days fished	Oct
Taggers		Sep
Recapture fishers		
2021-2025		
Harvest or experiential fishery - release rate of recaptured legal fish	Key species legal fish kept rate	
Flathead, Bream, Rockcod	Legal fish	105
2016-2025	Kept	74 (70%)
	Released	31 (30%)
Local or visitor fishery	Recapture fishers	75
Where recapture fishers live	Local	70 (93%)
2021-2025	Visitor	5 (7%)
Gender of recapture fishers (ex-taggers)	Recaptures	63
2021-2025	Male	58 (92%)
	Female	5 (8%)

Reliability level	LOW	MODERATE	MODERATE	HIGH
Samples	10	41	68	271
Confidence	80%	80%	90%	90%
Error	20%	10%	10%	5%

FISHING SEASONALITY

TYPE OF FISHERY

TYPE OF FISHER

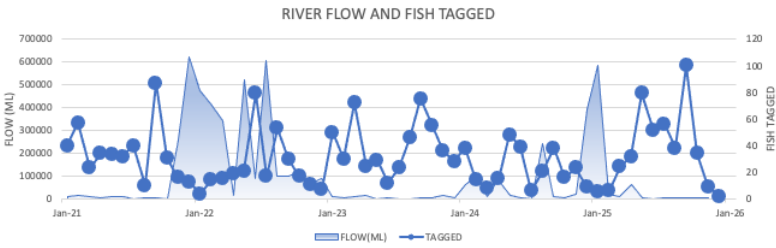
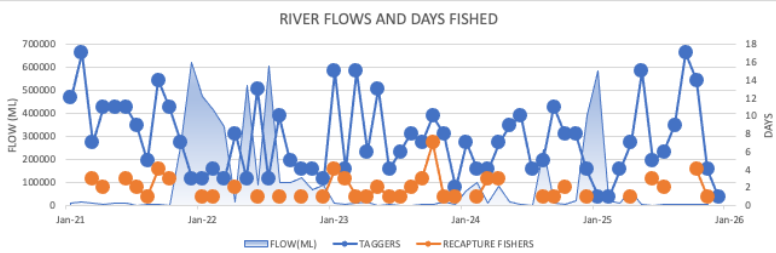
GENDER OF RECAPTURE FISHERS

FISHER ACTIVITY

<div>Monthly activity</div> <div>Days fished</div> <div>Taggers (451)</div> <div>Recapture fishers (75)</div> <div>2021-2025</div>	<div><div>Taggers</div><div>Recaps</div></div> <div><div>Month</div><div>Sep</div><div>Apr</div><div>Oct</div><div>Apr</div></div> <div><div>%</div><div>12%</div><div>11%</div><div>23%</div><div>12%</div></div>	<div>DAYS FISHED BY MONTH</div> <div><table><thead><tr><th>Month</th><th>Taggers (%)</th><th>Recapture Fishers (%)</th><th>Combined (%)</th></tr></thead><tbody><tr><td>JAN</td><td>7</td><td>8</td><td>7.5</td></tr><tr><td>FEB</td><td>6</td><td>7</td><td>6.5</td></tr><tr><td>MAR</td><td>8</td><td>9</td><td>8.5</td></tr><tr><td>APR</td><td>12</td><td>10</td><td>11</td></tr><tr><td>MAY</td><td>10</td><td>11</td><td>10.5</td></tr><tr><td>JUN</td><td>10</td><td>10</td><td>10</td></tr><tr><td>JUL</td><td>6</td><td>7</td><td>6.5</td></tr><tr><td>AUG</td><td>7</td><td>8</td><td>7.5</td></tr><tr><td>SEP</td><td>10</td><td>12</td><td>11</td></tr><tr><td>OCT</td><td>23</td><td>12</td><td>17.5</td></tr><tr><td>NOV</td><td>3</td><td>6</td><td>4.5</td></tr><tr><td>DEC</td><td>4</td><td>5</td><td>4.5</td></tr></tbody></table></div>	Month	Taggers (%)	Recapture Fishers (%)	Combined (%)	JAN	7	8	7.5	FEB	6	7	6.5	MAR	8	9	8.5	APR	12	10	11	MAY	10	11	10.5	JUN	10	10	10	JUL	6	7	6.5	AUG	7	8	7.5	SEP	10	12	11	OCT	23	12	17.5	NOV	3	6	4.5	DEC	4	5	4.5
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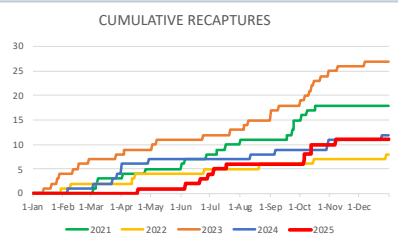
FISHER EFFORT

Fisher effort
Burnett River flow (ML)
Days fished
Taggers (blue dots)
Recapture fishers (orange dots)
2021-2025

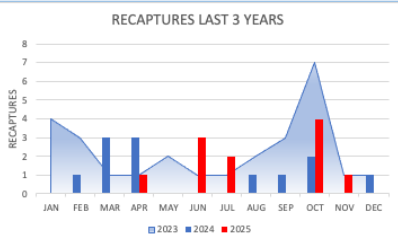


Cumulative recaptures
2021-2025

Year	Recaps
2021	18
2022	8
2023	27
2024	12
2025	11



Recaptures last 3 years
2023-2025

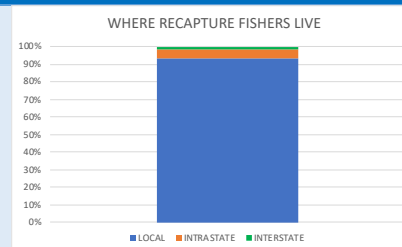


FISHER TRAVEL			
Cumulative distance (km) home to recapture location (ex-interstate) 2021-2025			
Total distance (km) home to recapture location (ex-interstate) 2021-2025	Year 2021 2022 2023 2024 2025	Km 368 457 578 207 319	
Distance (km) home to recapture location (ex-interstate) 2021-2025			
Average distance (km) from home to recapture location 2021-2025	Local Intrastate Interstate	Av distance (km) 16 209 1549	
Distance (km) home to recapture location Bars show distance range Dots show outliers 2021-2025	Local Intrastate Interstate	Range (km) 1-52 82-325 1549	

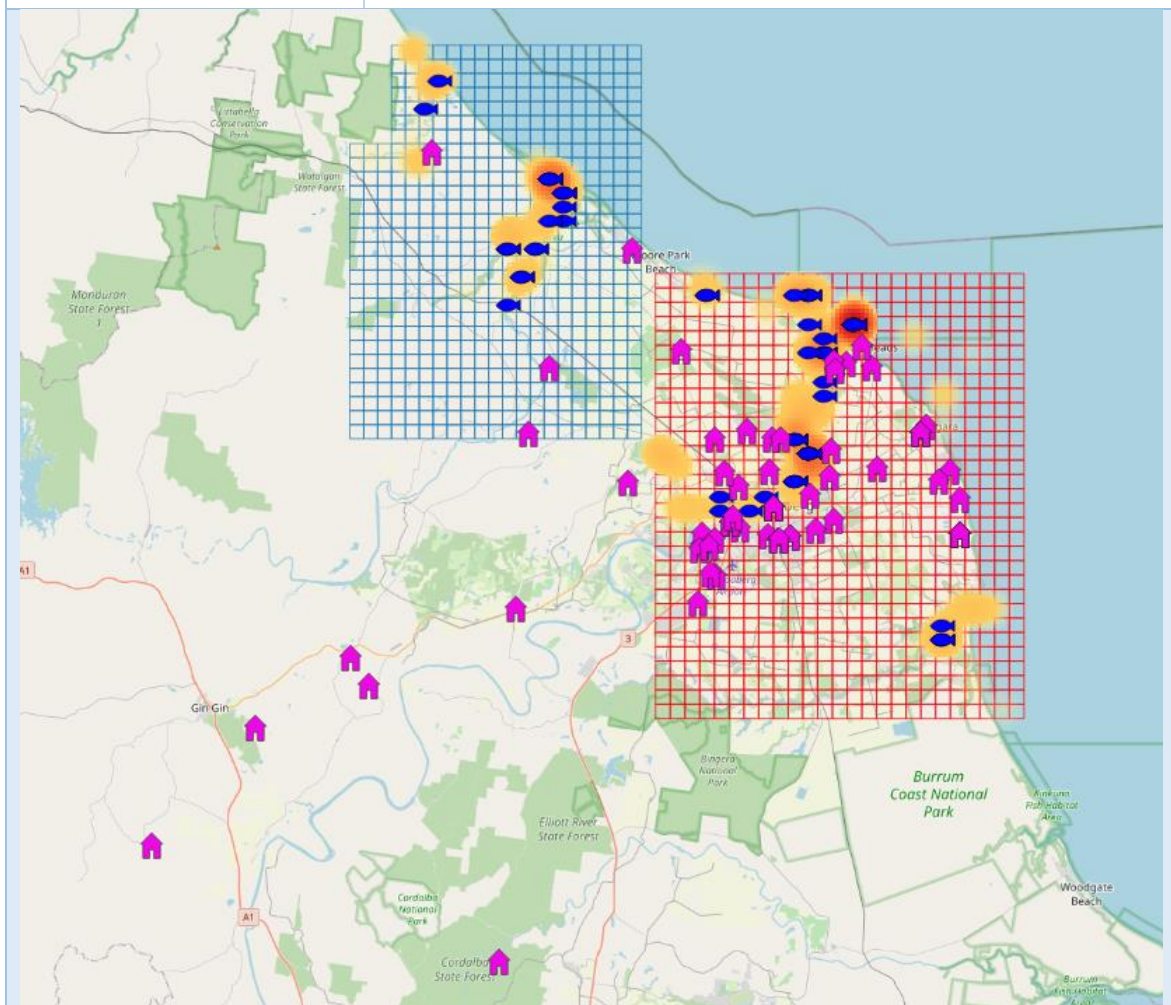
WHERE RECAPTURE FISHERS LIVE

Where recapture fishers live
2021-2025

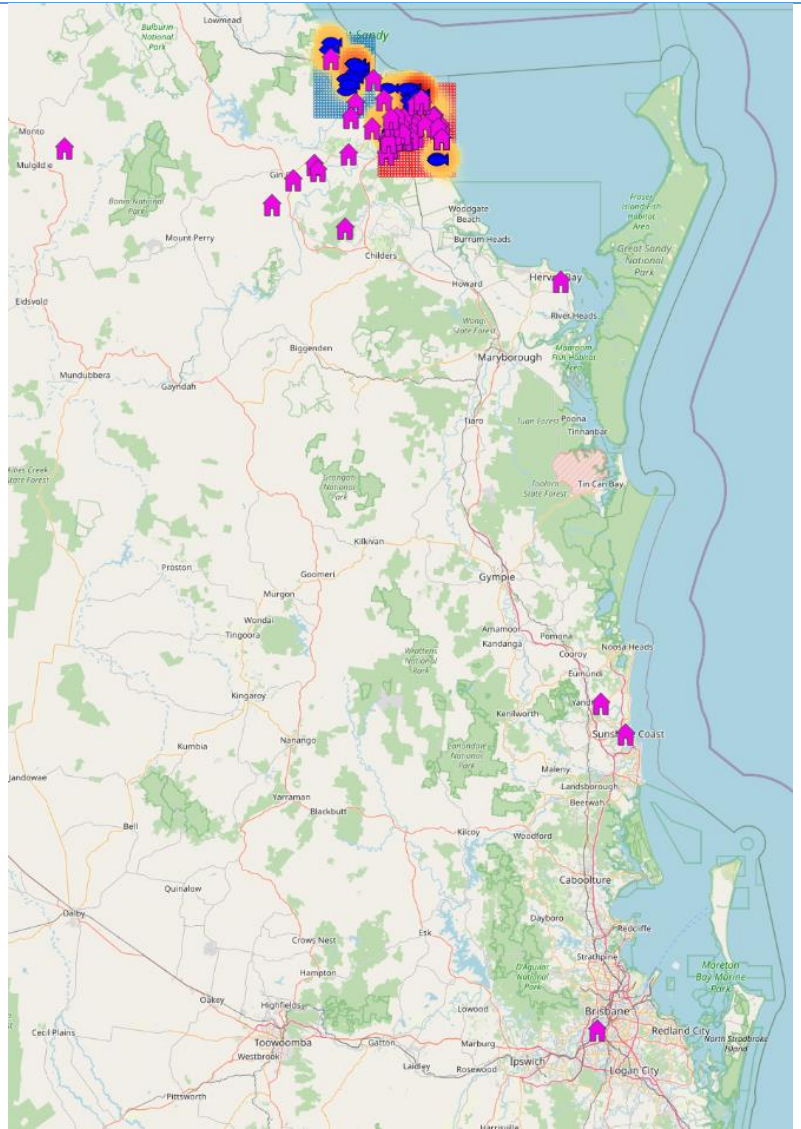
Recapture fishers 75
Local 70 (93%)
Intrastate 4 (5%)
Interstate 1 (1%)



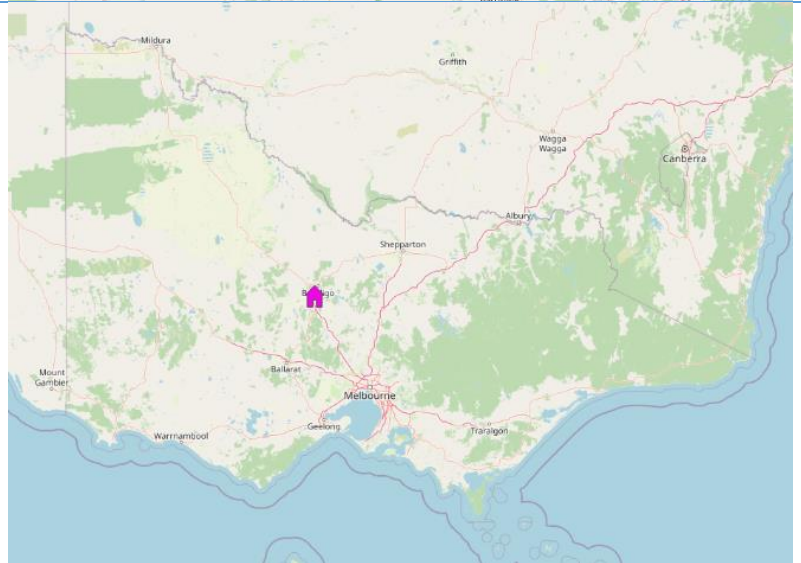
Where fishers recapturing fish live (pink houses)
Local
2021-2025



**Where fishers recapturing
fish live (pink houses)
Local
Intrastate
2021-2025**



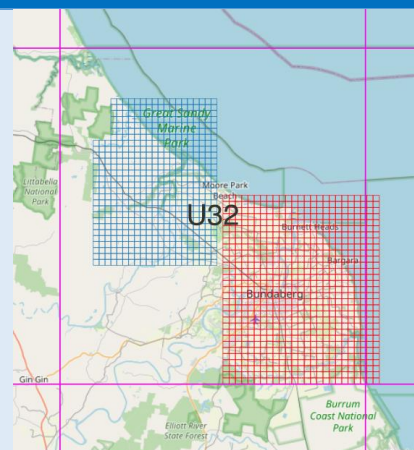
**Where fishers recapturing
fish live (pink houses)
Interstate
2021-2025**



COMMERCIAL CATCH

Commercial QFISH
Grid

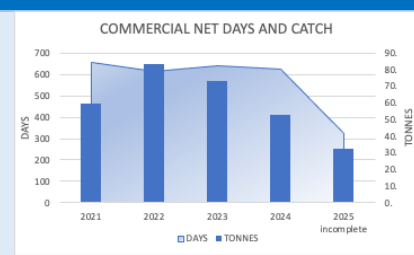
Grid
U32



ALL CATCH

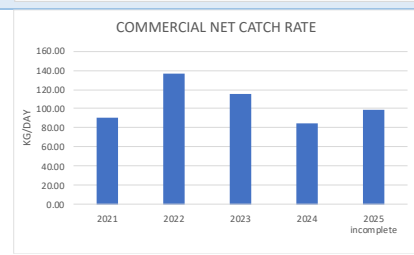
Commercial effort and
catch
Net fishery (all)
Grid U32
Days
Catch (tonnes)
2021-2025

Year	Days	Catch
2021	658	59.3
2022	612	83.4
2023	638	73.4
2024	626	53.0
2025*	324	32.2
*incomplete		



Commercial catch rate
Net fishery (all)
Grid U32
Kg/day
2021-2025

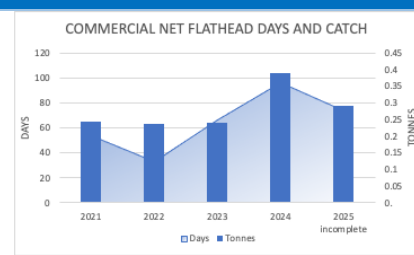
Year	Kg/day
2021	90.2
2022	136.3
2023	115.0
2024	84.7
2025*	99.4
*incomplete	



FLATHEAD

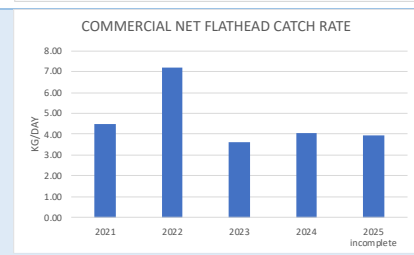
Commercial effort and
catch
Net fishery (Flathead)
Grid U32
Days
Catch (tonnes)
2021-2025

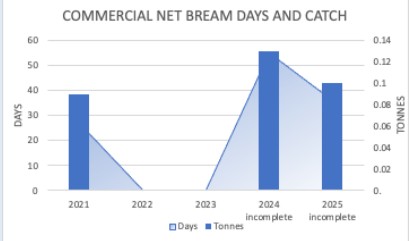
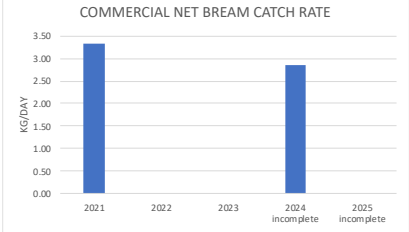
Year	Days	Catch
2021	54	0.24
2022	33	0.24
2023	66	0.24
2024	96	0.39
2025*	74	0.29
*incomplete		




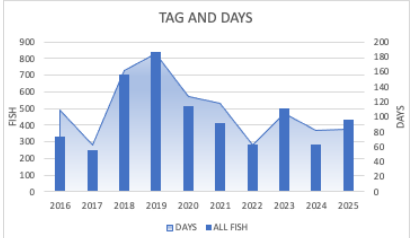
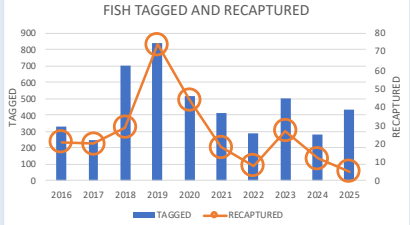
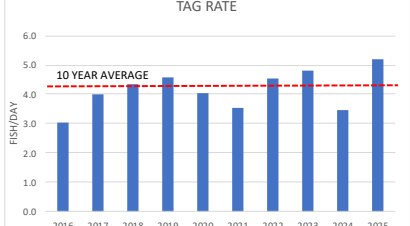


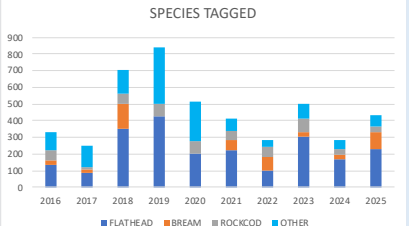
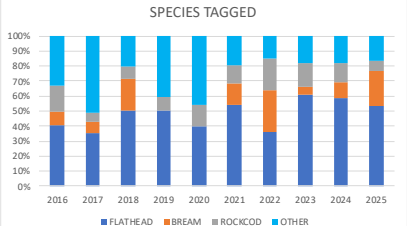
Commercial catch rate
Net fishery (Flathead)
Grid U32
Kg/day
2021-2025

Year	Kg/day
2021	4.5
2022	7.2
2023	3.6
2024	4.1
2025*	3.9
*incomplete	



BREAM				
Commercial effort and catch Net fishery (Bream) Grid U32 Days Catch (tonnes) 2021-2025	Year	Days	Catch	
	2021	27	0.09	
	2022	NA	NA	
	2023	NA	NA	
	2024	55	0.13	
	2025*	36	0.1	
2021-2025			*incomplete	
Commercial catch rate Net fishery (Bream) Grid U32 Kg/day 2021-2025	Year	Kg/day		
	2021	3.3		
	2022	NA		
	2023	NA		
	2024	2.4		
	2025*	2.8		
2021-2025			*incomplete	

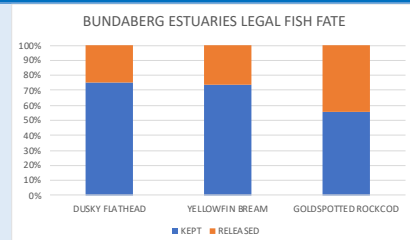
KEY SPECIES				
DUSKY FLATHEAD		YELLOWFIN BREAM		GOLDSPOTTED ROCKCOD
				
TAGGED AND TAG RATE				
Catch and effort taggers Tagged fish (4561) Days fished (1095) 2016-2025	High	Low	Now	
	Tagged fish			
	2019	2017	2025	
	841	247	436	
	Days			
2019	2022	2025		
187	64	84		
Tagged fish Recaptured 2016-2025	Tagged	4561		
	Recaptured	258		
	Recapture rate	5.7%		
	Tagged 2025	436		
				
Tag rate All tagged fish Fish/day 2016-2025	High	Low	Now	
	Tag rate			
	2023	2016	2025	
	4.7	3.0	7.5	
	10 year average			
		4.1		
				
				

SPECIES			
Species composition Numbers tagged 2016-2025	Dusky Flathead Yellowfin Bream Goldspotted Rockcod Other species	2239 489 543 1290	
Species composition Percentage tagged 2016-2025	Dusky Flathead Yellowfin Bream Goldspotted Rockcod Combined	49% 11% 12% 72%	

FATE

**Legal recaptures kept or released by recfishers (ex-taggers)
2016-2025**

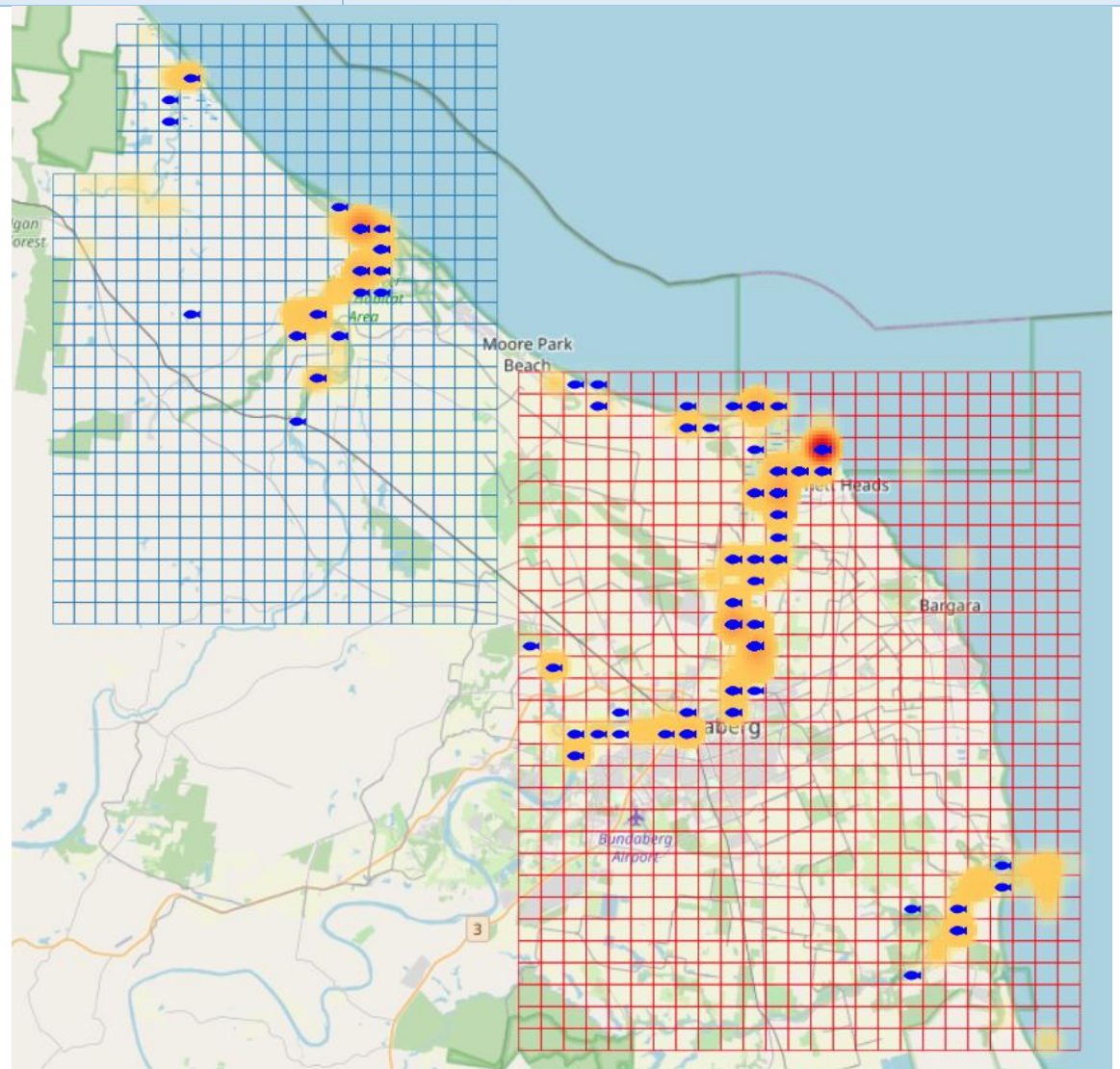
	Legal	Kept
Flathead	61	46 (75%)
Bream	19	14 (74%)
Rockcod	25	14 (56%)



LOCATIONS

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

Tagged	4561
Recaptures	258



FLATHEAD



DATA RELIABILITY

Sample size (av fish/year)
Tagged (blue arrow)
Recaptures (orange arrow)
Confidence %
Error %
2021-2025

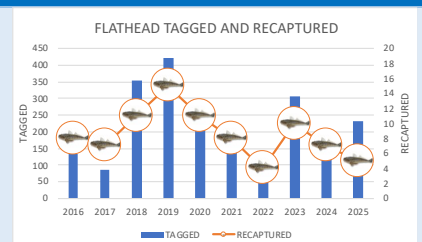
Reliability level	LOW	MODERATE	MODERATE	HIGH
Samples	10	41	68	271
Confidence	80%	80%	90%	95%
Error	20%	10%	10%	5%



TAGGED AND TAG RATE

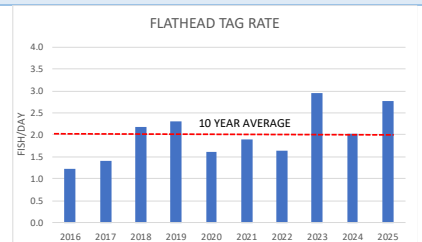
Flathead
Tagged
Recaptured
2016-2025

High	Low	Now
Tagged		
2019	2017	2025
423	87	233
Tagged		2239
Recaptured		86
Recapture rate		3.8%



Tag rate
Fish/day
2016-2025

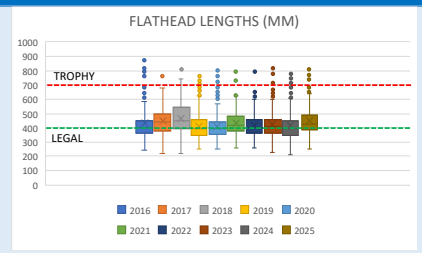
High	Low	Now
Tag rate		
2023	2016	2025
2.9	1.2	2.8
10 year average		2.0



LENGTHS

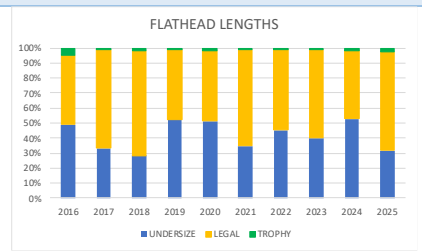
Average length (mm)
Bars show length range
Dots show outliers
2016-2025

High	Low	Now
Average length		
2018	2020	2025
466	410	445
Max		
2016	2019	2025
870	760	810



Fish lengths percentage
Undersize <400mm
Legal 400-700mm
Trophy 700+mm
2016-2025

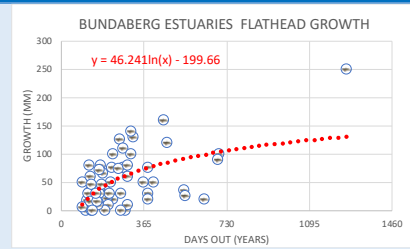
High	Low	Now
Legal-Trophy		
2018	2024	2025
70%	45%	66%
Trophy		
2016	2023	2025
4%	1%	3%



GROWTH

Flathead growth at the end of each year based on recaptures of fish tagged 2016-2025

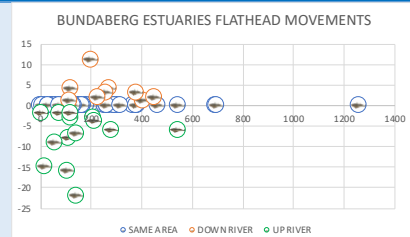
Recaptures	0
Growth (mm)	
Year 1	73
Year 2	105
Year 3	124
Year 4	137
Year 5	147



MOVEMENT

Flathead movement Distance moved (km) 2016-2025

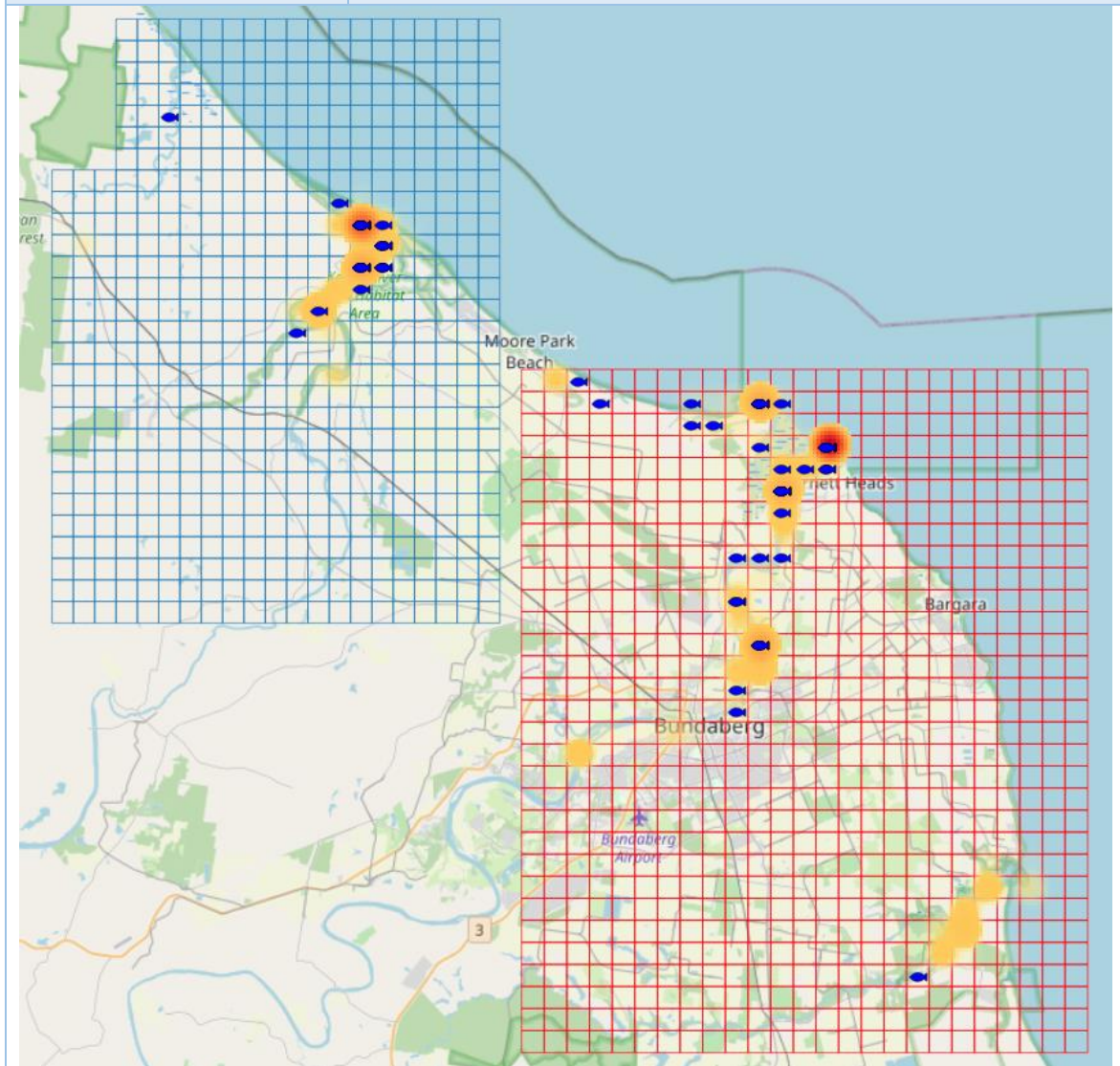
Recaptures	86
Same area	58 (67%)
Down river	9 (10%)
Up river	14 (16%)
Outside river	5 (6%)



LOCATIONS

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

Tagged	2239
Recaptured	86



BREAM



DATA RELIABILITY

Sample size (av fish/year)
Tagged (blue arrow)
Recaptures (orange arrow)
Confidence %
Error %
2021-2025

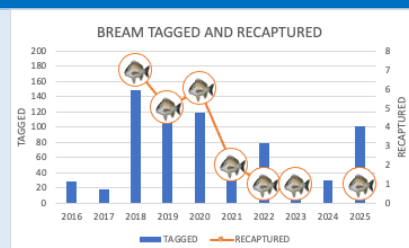
Reliability level	LOW	MODERATE	MODERATE	HIGH
Samples	10	41	68	271
Confidence	80%	80%	90%	95%
Error	20%	10%	5%	5%



TAGGED AND TAG RATE

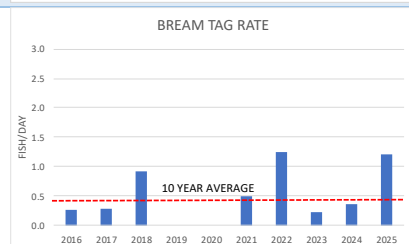
Bream
Tagged
Recaptured
2016-2025

High	Low	Now
Tagged	2017	2025
149	18	101
Tagged		739
Recaptured		23
Recapture rate		3.1%



Tag rate
Bream
Fish/day
2016-2025

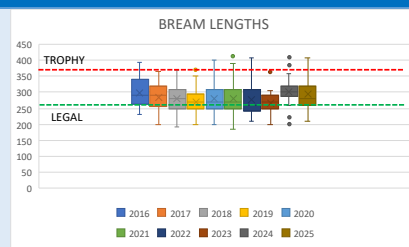
High	Low	Now
Tag rate	2023	2025
0.9	0.2	1.2
10 year average		0.5



LENGTHS

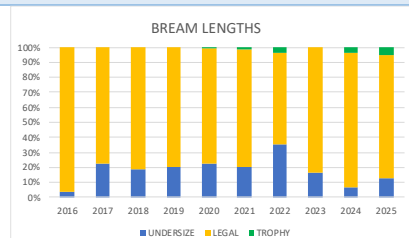
Average length (mm)
Bars show length range
Dots show outliers
2016-2025

High	Low	Now
Average length	2019	2025
303	271	294
Max	2017	2025
415	365	410



Fish lengths percentage
Undersize <250mm
Legal 250-400mm
Trophy 400+mm
2016-2025

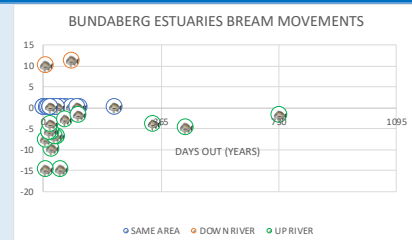
High	Low	Now
Legal-Trophy	2022	2025
97%	61%	82%
Trophy	2023	2025
4%	0%	5%



MOVEMENT

Bream movement
Distance moved (km)
2016-2025

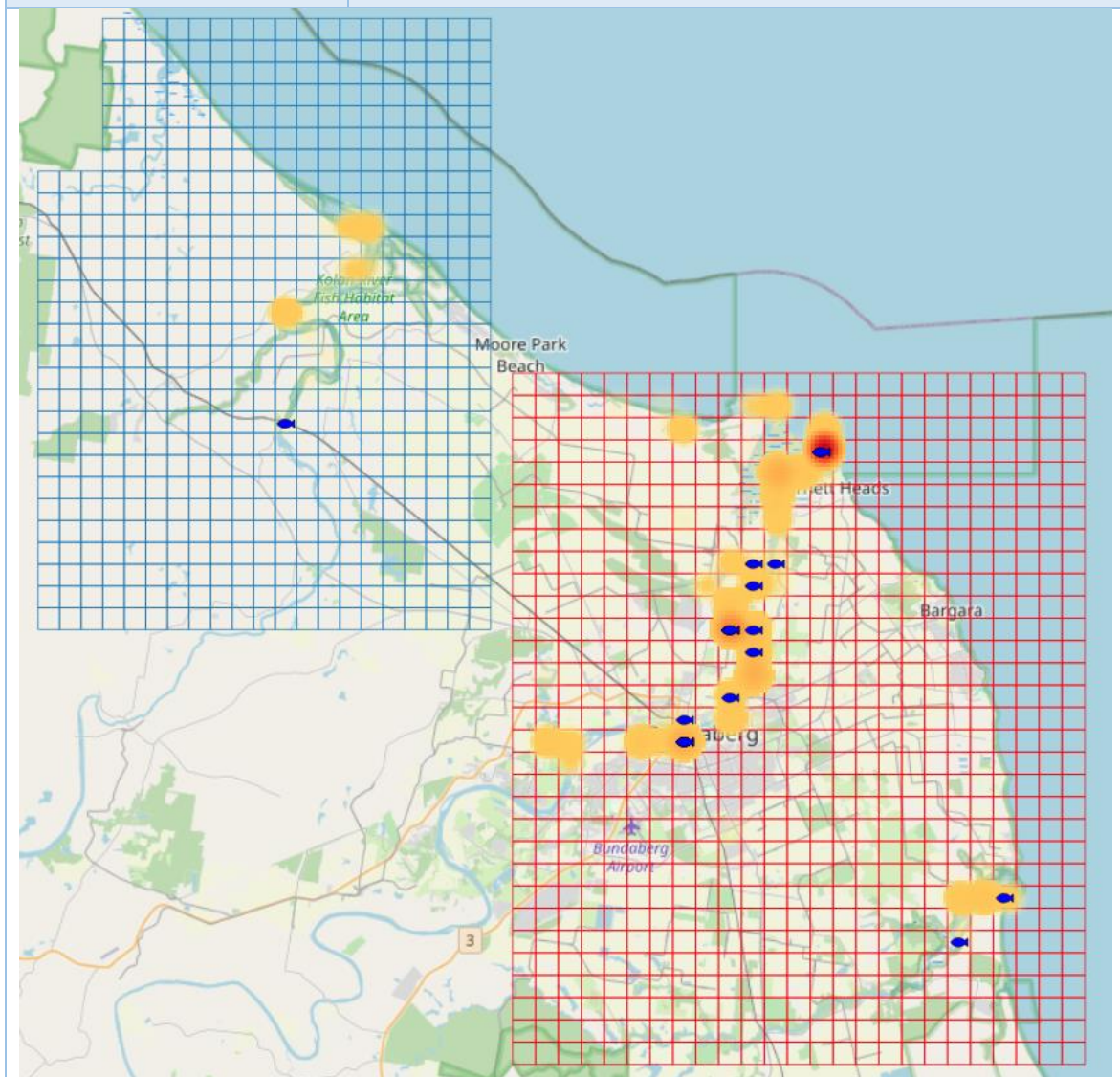
Recaptures	41
Same area	21 (51%)
Down river	4 (10%)
Up river	16 (39%)
Outside river	0



LOCATIONS

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

Tagged	739
Recaptured	23



ROCKCOD



DATA RELIABILITY

Sample size (av fish/year)
Tagged (blue arrow)
Recaptures (orange arrow)
Confidence %
Error %
2021-2025

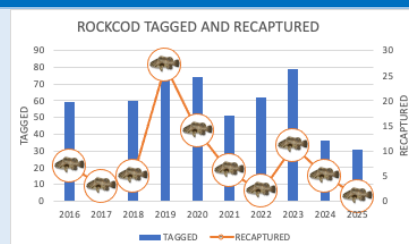
Reliability level	LOW		MODERATE		MODERATE		HIGH
Samples	10	41	68	271	384	664	
Confidence	80%		80%		90%		99%
Error	20%		10%		5%		5%



TAGGED AND TAG RATE

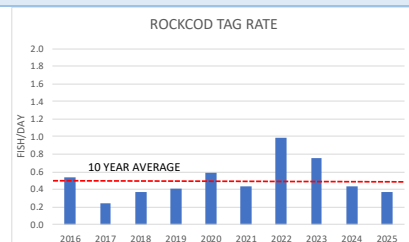
Rockcod
Tagged
Recaptured
2016-2025

	High	Low	Now
Tagged			
2023		2017	2025
	79	15	31
Tagged			543
Recaptured			81
Recapture rate			14.9%



Rockcod
Tag rate
Fish/day
2016-2025

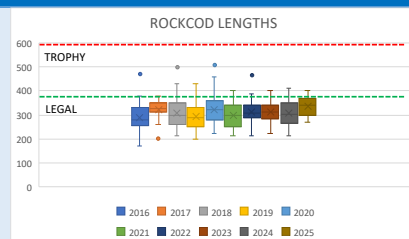
	High	Low	Now
Tag rate			
2022		2017	2025
	1.0	0.2	0.4
10 year average			0.5



LENGTHS

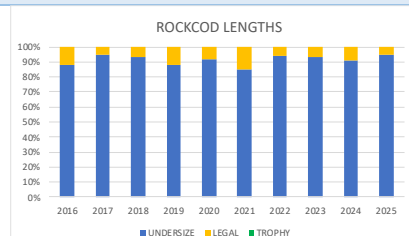
Average length (mm)
Bars show length range
Dots show outliers
2016-2025

	High	Low	Now
Average length			
2020		2016	2025
	321	289	338
Max			
2020		2017	2025
	500	380	400



Fish lengths percentage
Undersize <400mm
Legal 400-600mm
Trophy 600+mm
2016-2025

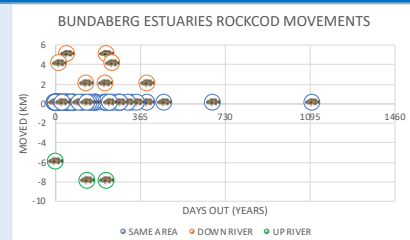
	High	Low	Now
Legal -Trophy			
2020		2022	2025
	15%	6%	6%
Trophy			
No trophy length fish any year			



MOVEMENT

Rockcod movement 2016-2025

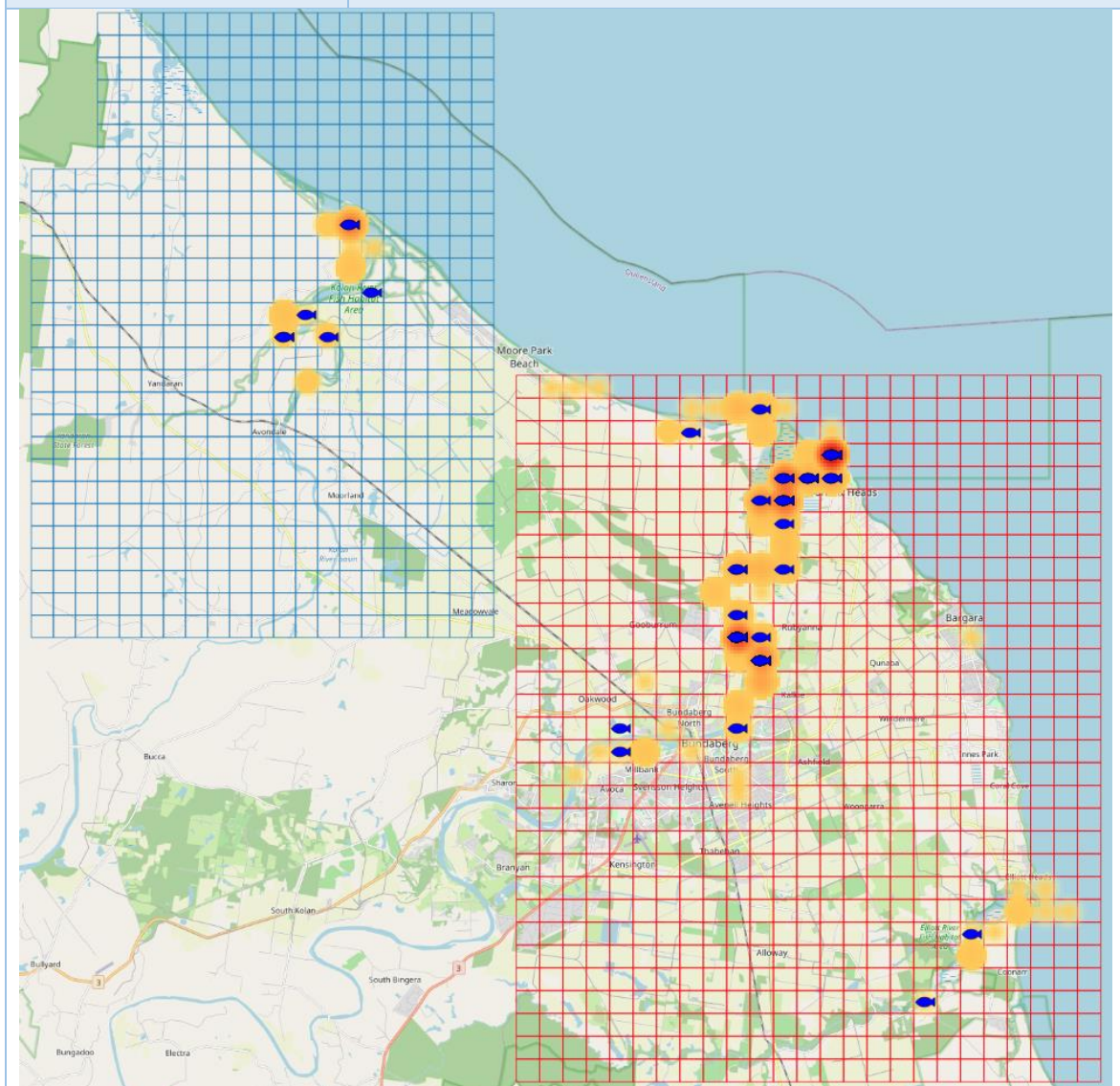
Recaptures	83
Same area	73(88%)
Down river	7 (9%)
Up river	3 (4%)
Outside river	0



LOCATIONS

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

Tagged	543
Recaptured	81



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, Miara on Kolan River, and Riverview on Elliott 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 ≥ 700 mm.
- For Yellowfin Bream undersized fish are <250mm, legal fish are ≥ 250 mm and <400mm and trophy fish are ≥ 400 mm.
- For Goldspotted Rockcod undersized fish are <380mm, legal fish are ≥ 380 mm and <600 and trophy fish are ≥ 600 mm.
- 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 <80km, Intrastate ≥ 80 km and Qld postcodes, Interstate postcodes other than Qld.