



TOWNSVILLE REVIEW 2025

INFORMATION RATING



Key species: Pikey Bream, Barred Javelin, Barramundi

Fish timeframe: 2016-2025

Fisher timeframe: 2021-2025

Scroll through the dashboard to cover all subjects or for information on a specific subject go to:

[TOWNSVILLE ESTUARIES OVERVIEW](#)

[TOWNSVILLE LOCATION](#)

[ENVIRONMENTAL CONDITIONS](#)

[TYPE OF FISHERY](#)

[FISHER ACTIVITY](#)

[FISHER EFFORT](#)

[FISHER TRAVEL](#)

[WHERE RECAPTURE FISHERS LIVE](#)

[COMMERCIAL CATCH](#)

[KEY SPECIES](#)

[PIKEY BREAM](#)

[BARRED JAVELIN](#)

[BARRAMUNDI](#)



Product of Infofish Australia



Supported by Suntag and
Department of Agriculture and Fisheries



TOWNSVILLE ESTUARIES OVERVIEW

Summary of 2025

- Townsville estuaries are limited, mostly fished by locals and predominantly a harvest fishery.
- Barramundi is a target species but not tagged in the same numbers as elsewhere.
- After a number of years of low tag numbers there has been a slight improvement this year.

The only rivers in the Townsville area are the Ross, Bohle and Black with several smaller creeks running into Cleveland Bay. The Ross River is highly regulated with the Ross Dam and 3 weirs between the dam and the tidal limit. The Bohle and Black are small rivers with limited water above the tidal limit. This provides a limited range of estuarine fishing options with the Bohle River heavily fished by locals.

Data from this area over the past decade has come substantially from the Bohle River and tagging effort has been aimed at the more prolific species such as Bream and Javelin. While Barramundi are targeted the effort on this species is not as focused as in other areas of the coast accounting for just 2% of the fish tagged.

The loss of several keen taggers in 2020 due to ill health has resulted in a significant decline in tagging in the area for the last 3 years resulting in a drop in the information rating for the area. Local estuary fishers and the current group of taggers are more inclined to fish nearby areas such as Bowling Green Bay and the Hinchinbrook Channel. Beyond the estuaries there is significant offshore fishing effort.

Main target species are Bream and Javelin which accounted for 54% of the tagging effort. With the drop in tagging effort there has been a decline in recaptures. While the recapture rates for Bream and Javelin were high many recaptures were made by taggers recapturing their own fish adding to the rate.

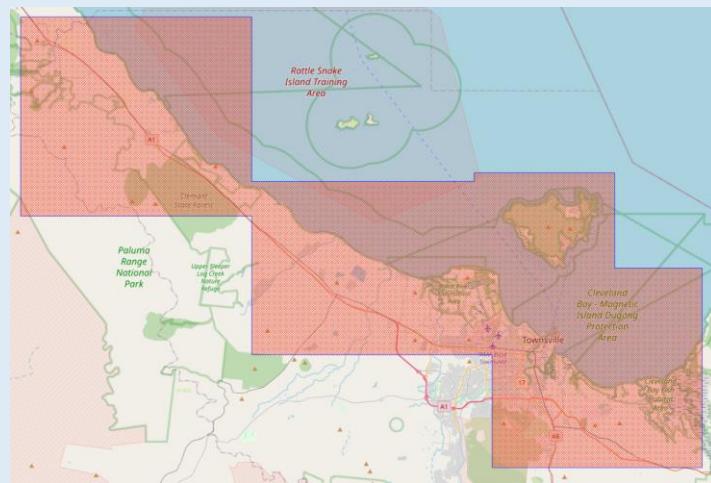
Given the limited fishing estuary fishing opportunities it is not surprising that 96% of recaptures were made by locals. Given the fish sizes and the limited number of legal fish tagged this area is likely to be a predominantly harvest fishery.

TOWNSVILLE LOCATION

Townsville

19.25°S

146.82°E



WATERWAYS

Grid maps

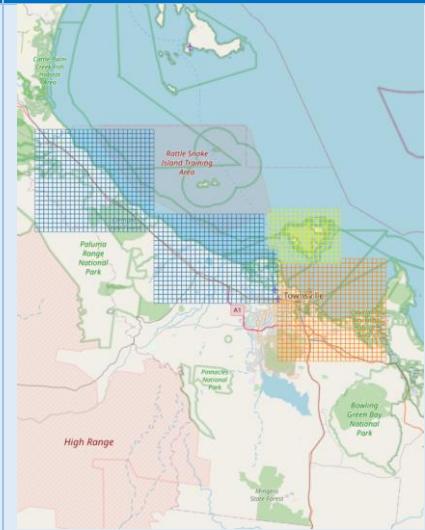
Cleveland Bay CBT

Bohle River HBT

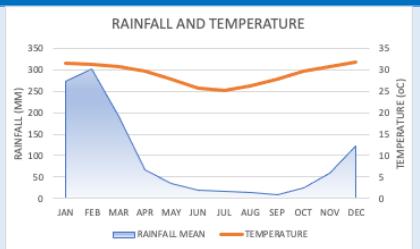
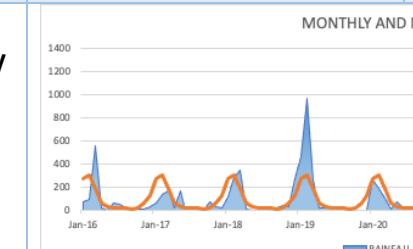
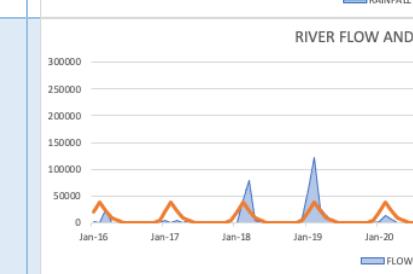
Magnetic Island MIT

Rollingstone RST

Cocoa Creek
Crocodile Creek
Alligator Creek
Cleveland Bay creeks
Ross River
Ross Creek
Bohle River
Black River
Bluewater Creek
Sleeper Log Creek
Leichhardt Creek
Rollingstone Creek
Crystal Creek



ENVIRONMENTAL CONDITIONS

Townsville Mean monthly rainfall (mm)	Rainfall High Feb 302 Jan 272 Temp Month oC Nov-Mar 31	 <p>RAINFALL AND TEMPERATURE</p> <p>This dual-axis line graph shows monthly rainfall and temperature in Townsville. The left y-axis represents rainfall in millimeters (0 to 350), and the right y-axis represents temperature in degrees Celsius (0 to 35). The blue line represents mean monthly rainfall, which peaks in February (approx. 300 mm) and drops to near zero by June. The orange line represents mean monthly temperature, which starts around 28°C in January, drops to a minimum of about 22°C in June, and rises again to about 28°C by December.</p>
Townsville monthly rainfall and mean monthly rainfall (mm) 2016-2025	 <p>MONTHLY AND MEAN RAINFALL (MM)</p> <p>This line graph displays monthly rainfall (blue bars) and mean monthly rainfall (orange line) from January 2016 to January 2026. The y-axis ranges from 0 to 1400 mm. The graph shows significant seasonal variation, with major peaks occurring in January 2016 (~400 mm), January 2019 (~1000 mm), and January 2025 (~1100 mm). Mean rainfall remains relatively stable around 200-300 mm throughout the period.</p>	
Black River monthly flow and mean monthly flow (ML) 2016-2025	 <p>RIVER FLOW AND MONTHLY MEAN (ML)</p> <p>This line graph displays monthly river flow (blue bars) and mean monthly river flow (orange line) from January 2016 to January 2026. The y-axis ranges from 0 to 300,000 ML. The graph shows major peaks in January 2016 (~40,000 ML), January 2019 (~100,000 ML), and January 2025 (~200,000 ML). Mean flow is consistently low, around 10,000 ML.</p>	

TYPE OF FISHERY

DATA RELIABILITY

Sample size (days fished)

Tag days (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%



Seasonality

Days fished combined

Taggers

Recapture fishers

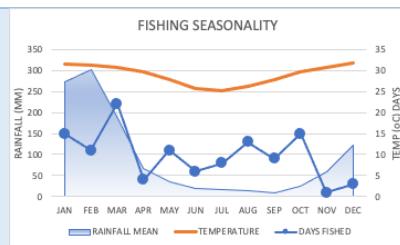
2021-2025

Months

Most effort

Mar

Oct



Harvest or experiential fishery

Legal fish 56

Kept 26 (46%)

Released 30 (54%)

Where recapture fishers live

2021-2025

Recapture fishers

53

Local

44 (83%)

Visitor

9 (17%)



Gender of recapture fishers (ex-taggers)

2021-2025

Fishers

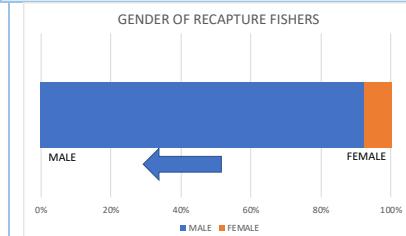
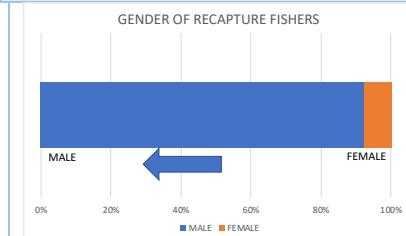
51

Female

4 (8%)

Male

47 (92%)



FISHER ACTIVITY

Monthly activity

Days fished combined
Taggers (66)
Recapture fishers (52)
2021-2025

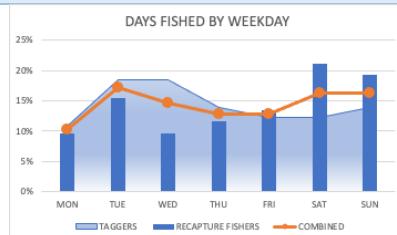
Month	Days
Combined	22 (19%)
Mar	15 (13%)
Oct	15 (13%)
Jan	15 (13%)



Weekday activity

Days fished combined
Taggers (66)
Recapture fishers (52)
2021-2025

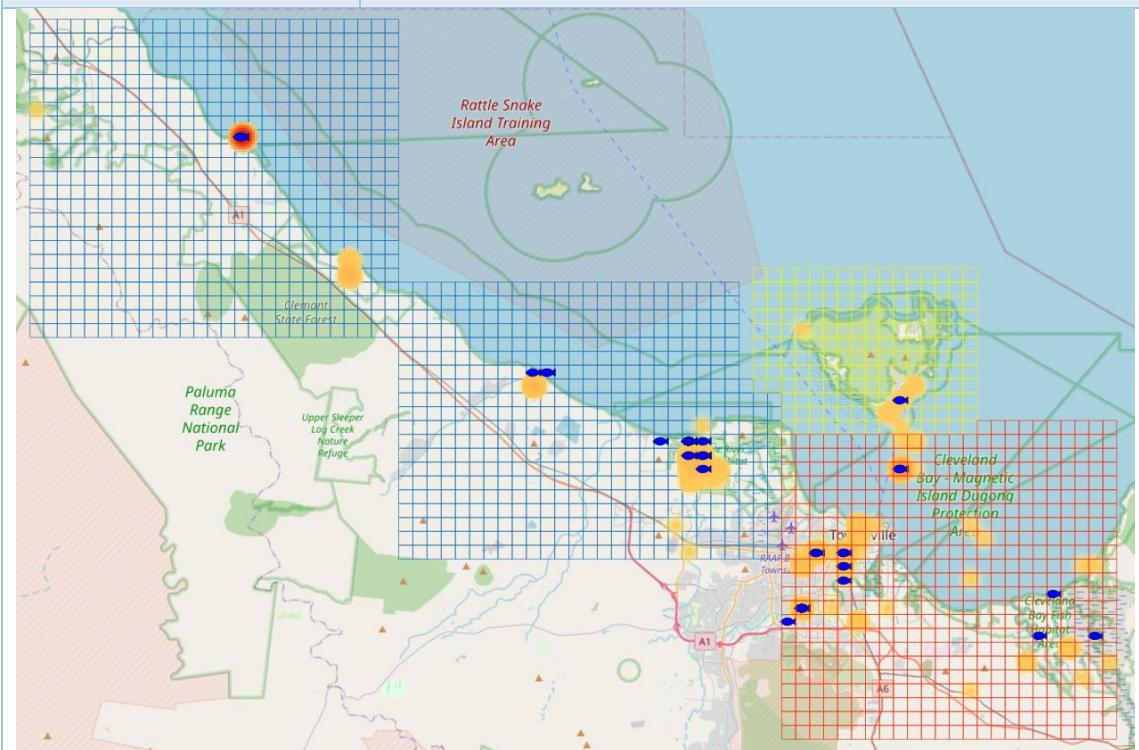
Combined	38 (32%)
Weekend	79 (68%)
Weekdays	



Location activity

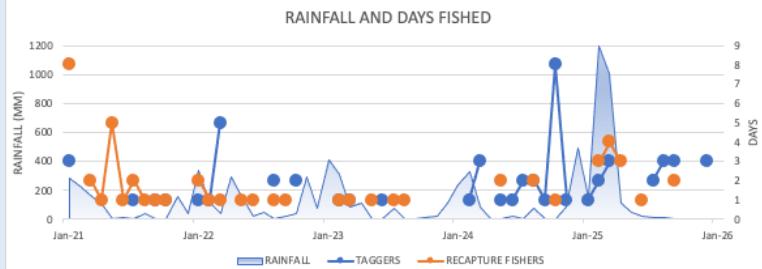
Taggers (red-orange heat map)
Recapture fishers (blue fish)
2021-2025

Tagged	253
Recaptured	53

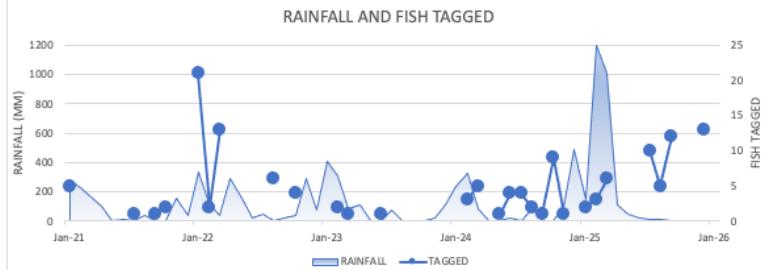


FISHER EFFORT

Monthly rainfall
Days fished
Taggers
Recapture fishers
2021-2025

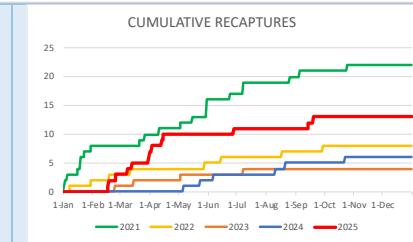


Mean monthly rainfall
Fish tagged
2021-2025



Cumulative recaptures
2021-2025

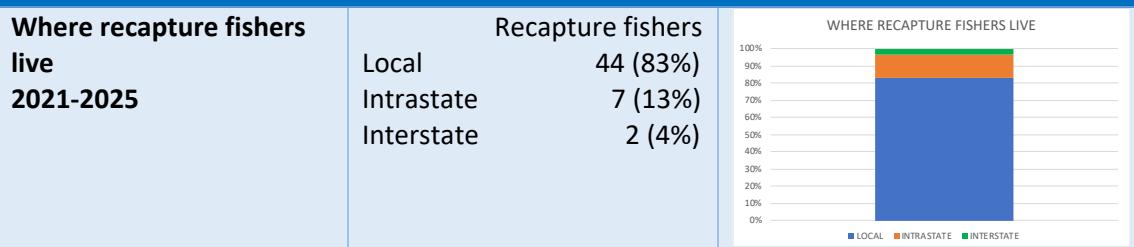
Year	Recaps
2021	22
2022	8
2023	4
2024	6
2025	13



FISHER TRAVEL

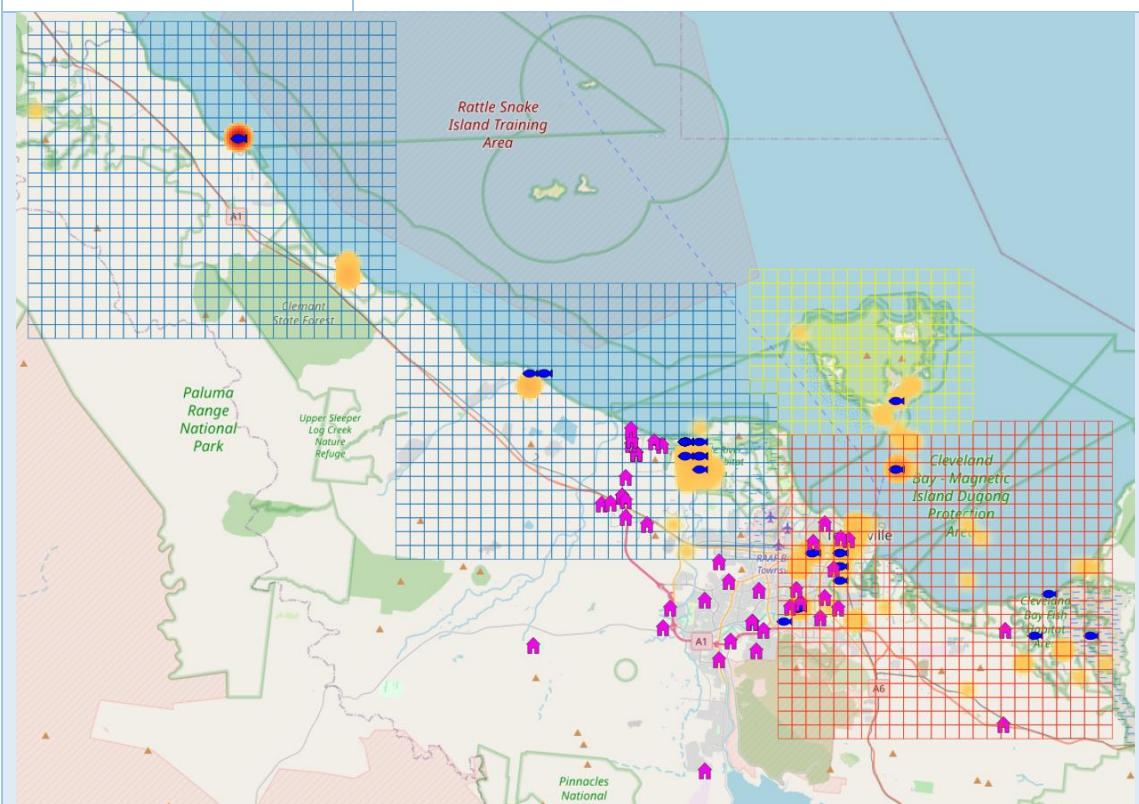
Cumulative distance (km) home to recapture location 2021-2025		<p>CUMULATIVE PROXY TRAVEL DISTANCE (KM)</p>
Total distance (km) home to recapture location 2021-2025	Year 2021 2022 2023 2024 2025	Km 1721 698 47 2672 3323
Distance (km) home to recapture location Bars show distance range Dots show outliers 2021-2025	Range (km) Local (44) 1-42 Intrastate (7) 158-1140 Interstate (2) 1755-2460	<p>RECAPTURE FISHERS PROXY TRAVEL</p>
Average distance (km) from home to recapture location 2021-2025	Av distance (km) Local 9 Intrastate 553 Interstate 2108	<p>RECAPTURE FISHER'S PROXY AVERAGE TRAVEL</p>

WHERE RECAPTURE FISHERS LIVE

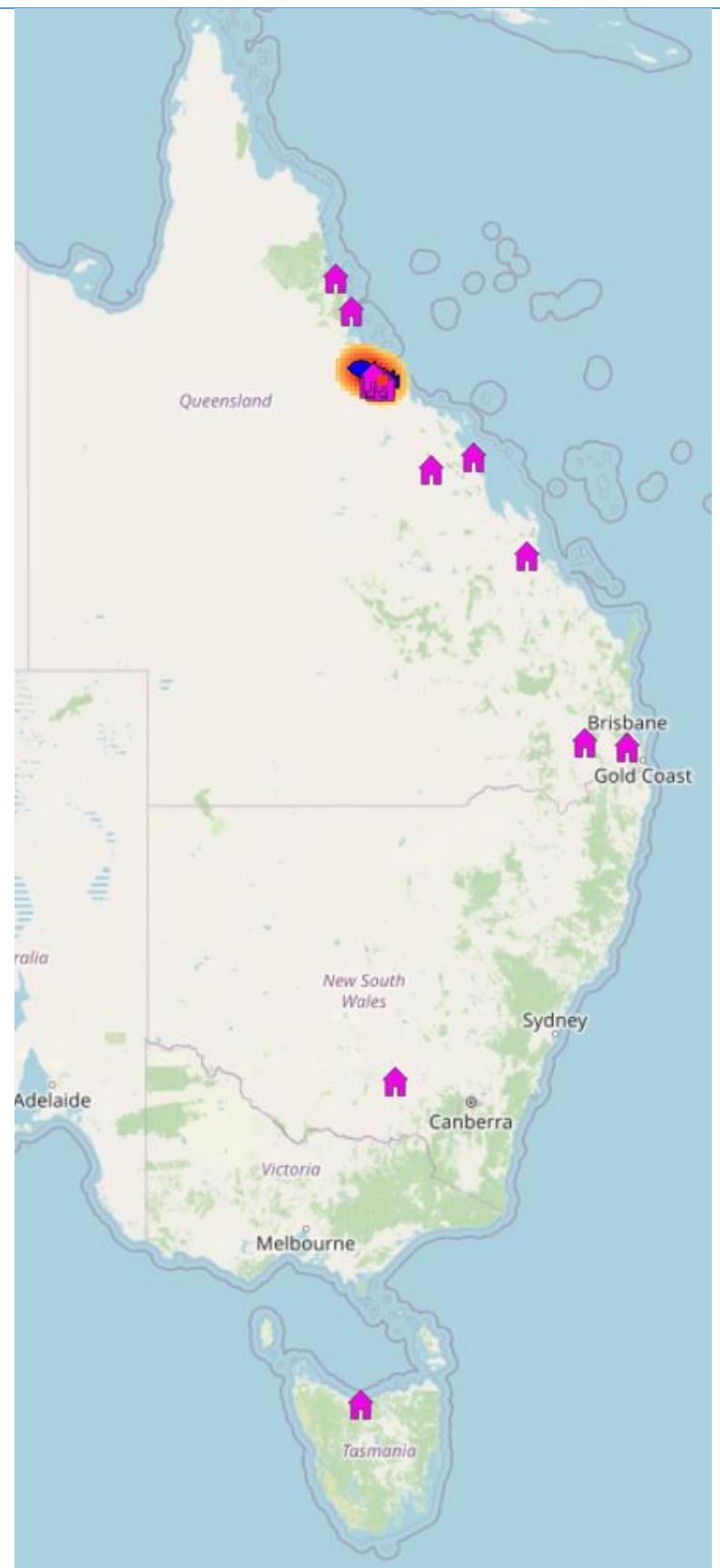


Where fishers recapturing fish live (pink houses)

Local
2021-2025



**Where fishers recapturing
fish live (red stars)**
Intrastate
Interstate
2021-2025



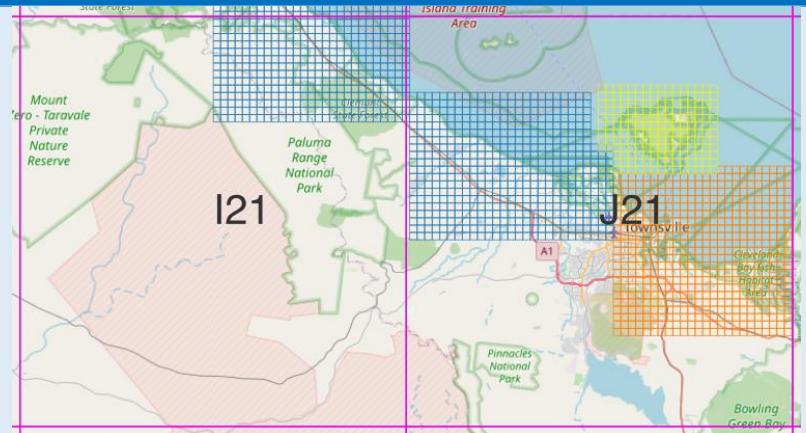
COMMERCIAL CATCH

Commercial QFISH

Grids

I21

J21



COMMERCIAL EFFORT AND CATCH			
Year	Days	Catch	
2021	178	34.63	
2022	122	32.84	
2023	161	26.53	
2024	NA	NA	
2021-2025	NA	NA	
*incomplete			
COMMERCIAL CATCH RATE			
Kg/day		Kg/day	
2021		194.6	
2022		269.2	
2023		164.8	
2024		NA	
2021-2025		NA	
*incomplete			

Year	Days	Tonnnes
2021	~180	~35
2022	~130	~33
2023	~160	~30
2024	~100	~0
2025*	~0	~0

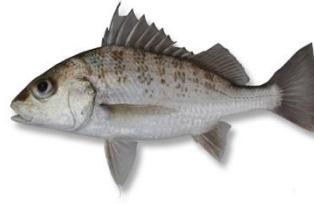
Year	Kg/day
2021	~200
2022	~270
2023	~170
2024*	~0
2025*	~0

KEY SPECIES

PIKEY BREAM



BARRED JAVELIN



BARRAMUNDI



TAGGED AND TAG RATE

Tag and effort taggers

Fish tagged (7106)

Days fished (698)

2016-2025

High

Low

Now

Tagged fish

2016 2023

2025

1889 5

51

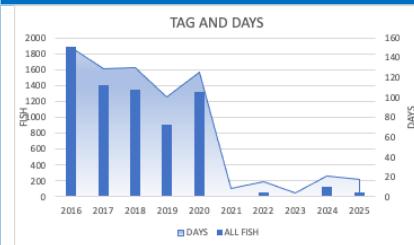
Days fished

2016 2023

2025

151 4

17



Fish tagged

Recaptures

2016-2025

Tagged

7106

Recaptured

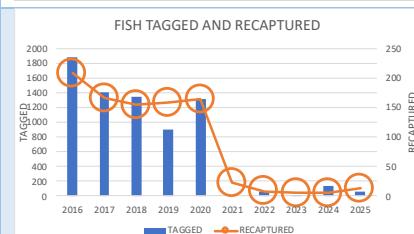
903

Recapture rate

12.7%

Tagged 2025

51



Tag rate

All fish tagged

Fish/days fished

2016-2025

High

Low

Now

Tag rate

2016 2023

2025

12.5 1.3

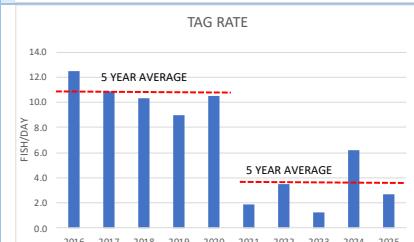
2.7

5 year average

10.8

5 year average

3.9



SPECIES

Species composition

Numbers tagged

2016-2025

Pikey Bream

2528

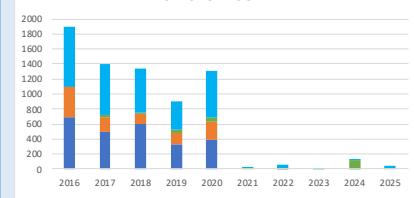
Barred Javelin

1120

Barramundi

309

SPECIES TAGGED



Species composition

Percentage tagged

2016-2025

Pikey Bream

36%

Barred Javelin

16%

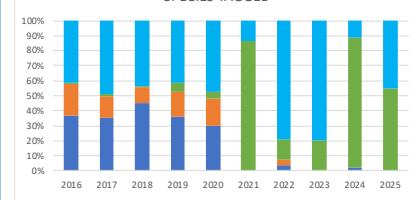
Barramundi

4%

Combined

56%

SPECIES TAGGED

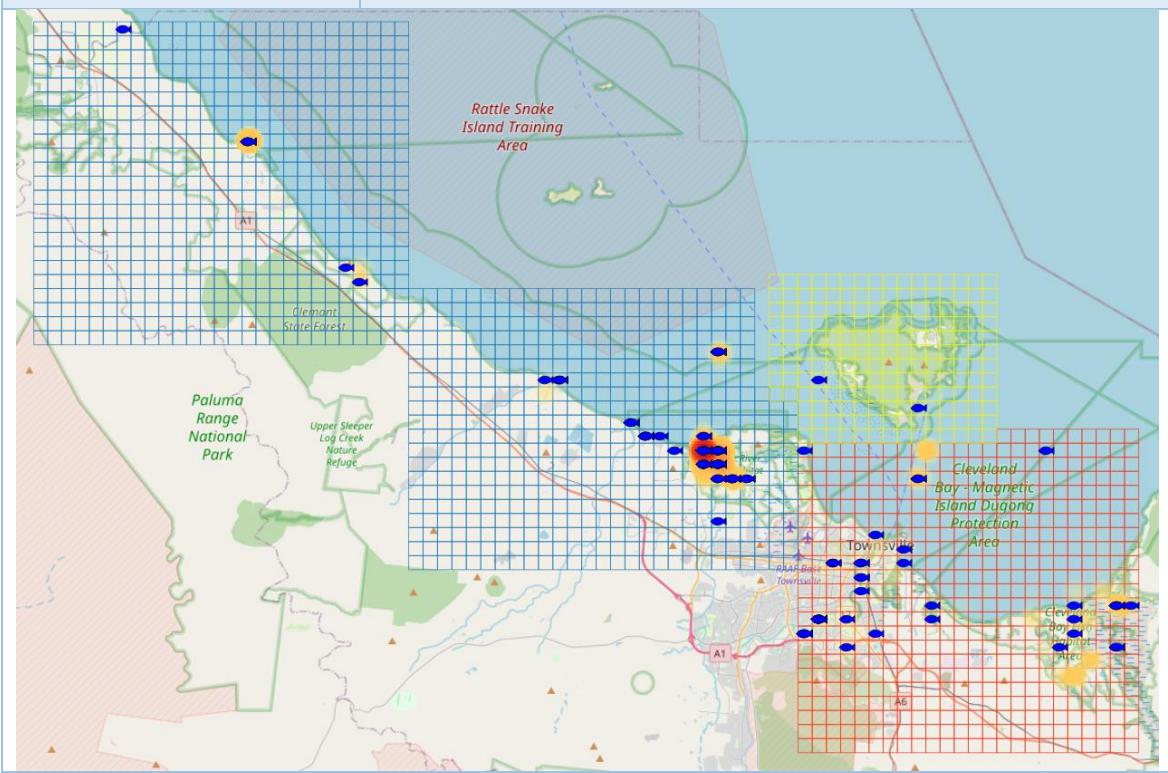


LOCATIONS

All tagged fish (red-orange
heat map)
Recaptured (blue fish)
2016-2025

Tagged
Recaptured

7106
885



PIKEY BREAM



DATA RELIABILITY

Sample size (av fish/year)

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

Tagged (blue arrow)

Recaptures (orange arrow)

Confidence %

Error %

2021-2025



TAGGED

Tagged

Tagged 2528

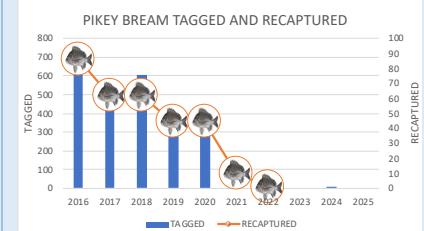
Recaptures

Recaptured 309

2016-2025

Recapture rate 12.2%

Tagged 2025 0



LENGTHS

Average length (mm)

High Low Now

Bars show length range

Average length

2017 2018 2025

2017 2018 2025

2016-2025

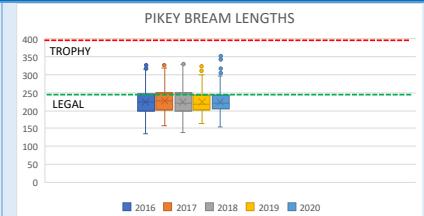
228 224 NA

Largest

2020 2019 2025

2016-2025

353 324 NA



Fish lengths percentage

High Low Now

Undersize <250mm

Legal-trophy

Legal 250-400mm

2018 2020 2025

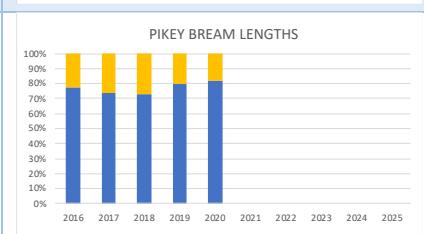
Trophy 400+mm

27% 18% NA

2016-2025

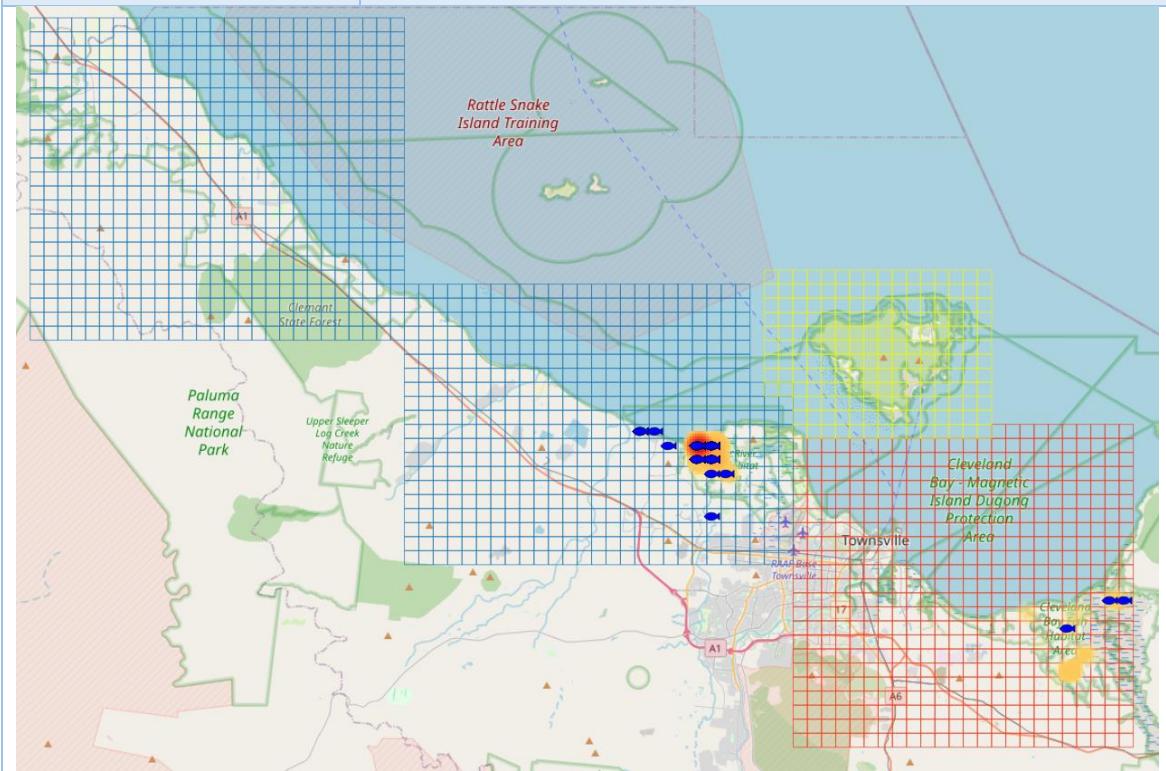
Trophy

No trophy fish in any year



LOCATIONS

Pikey Bream	Tagged	2528
Tagged (red-orange heat map)	Recaptured	309
Local recaptures (blue fish) 2016-2025		



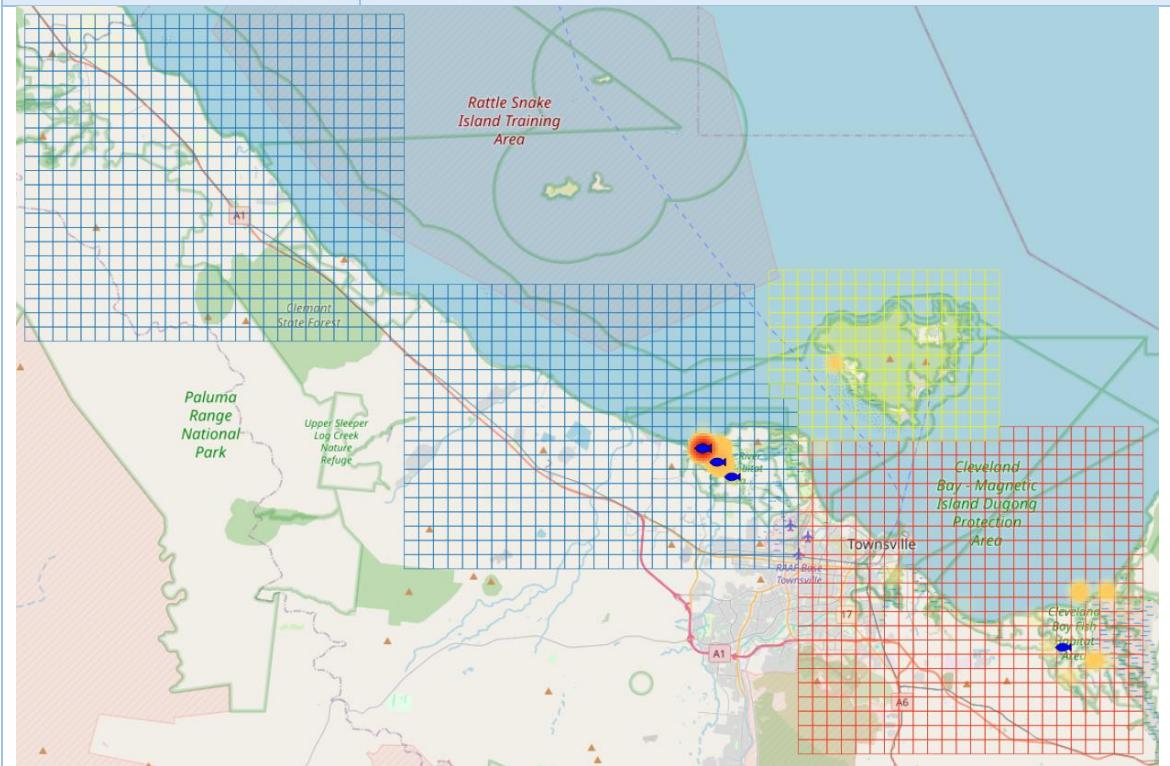
LOCATIONS

Barred Javelin
Tagged (red-orange heat map)
Local recaptures (blue fish)
2016-2025

Tagged
 Recaptured

1120

57



BARRAMUNDI



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	664
Confidence	80%	80%	90%	95%
Error	20%	10%	10%	5%



TAGGED

Barramundi

Tagged

Recaptures

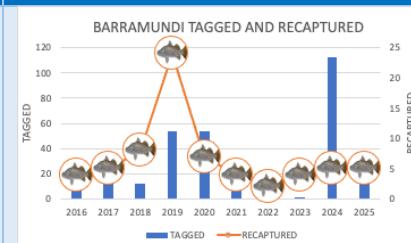
2016-2025

Tagged 309

Recaptured 68

Recapture rate 22.0%

Tagged 2025 25



LENGTHS

Average length (mm)

Bars show length range

Dots show outliers

2016-2025

High Low Now

Average length

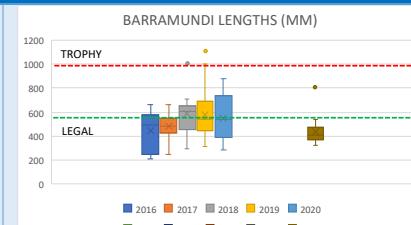
2018 2016 2025

589 441 434

Largest

2019 2017 2025

1115 660 810



Fish lengths percentage

Undersize <580mm

Legal 580-1000mm

Trophy 1000+mm

2016-2025

High Low Now

Legal-trophy

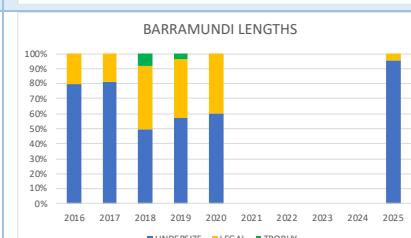
2018 2017 2025

42% 19% 4%

Trophy

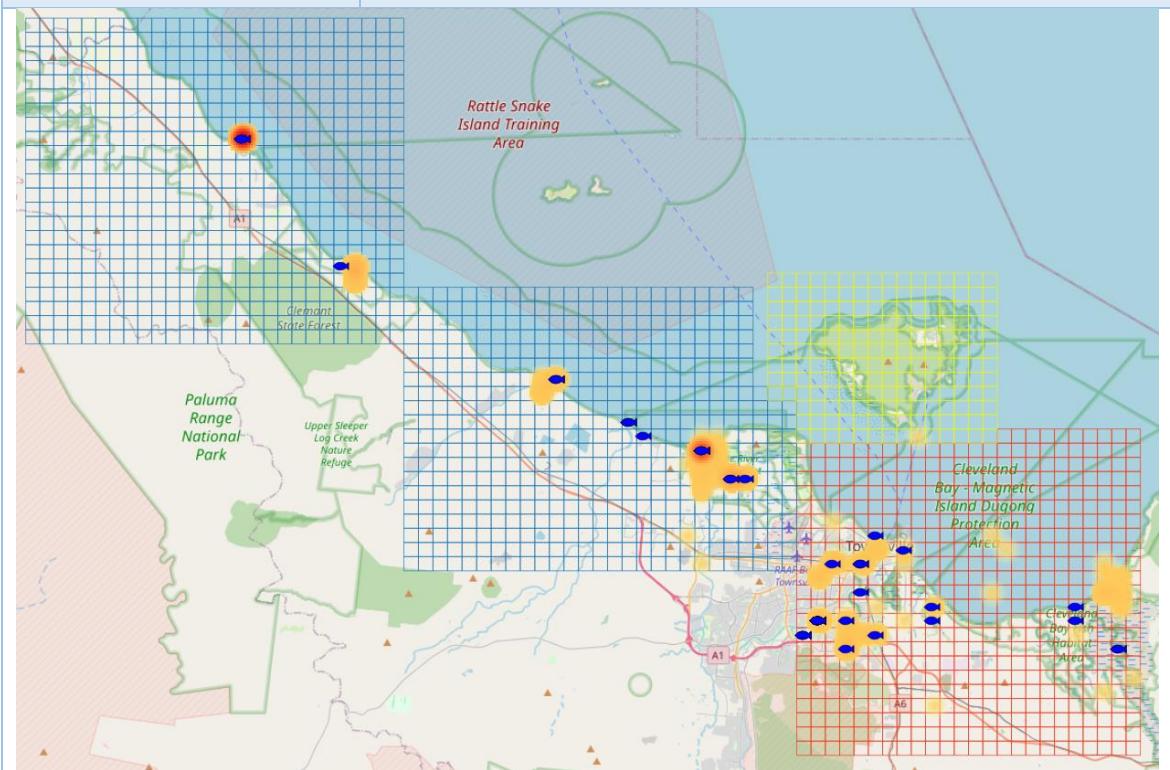
2018 2020 2025

8% 0% 0%



LOCATIONS

Barramundi	Tagged	309
Tagged (red-orange heat map)	Recaptured	68
Recaptured (blue fish) 2016-2025		



Data sources

Data used in the Townsville Crystal Bowl are:

- Tag records and recapture records for the river at <http://crystalbowl.infofishaustralia.com.au/>.
- Rainfall and temperature records obtained for Townsville Aero station 032040 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 over the past 5 years.
- Catch rates calculated as number of fish tagged/fisher day for taggers with a minimum of 12 fisher days (at least 1 per month) to provide an acceptable catch rate.
- For Pikey Bream undersized fish are <250mm, legal fish are >=250mm and <400mm and trophy fish are >=400mm.
- For Barred Javelin undersized fish are <400mm, legal fish are >=400mm and <600 and trophy fish are >=600mm.
- For Barramundi undersized fish are <580mm, legal fish are >=580 and <1000mm and trophy fish are >=1000mm.
- Locations based on Infofish grid map CBT, HBT and MIT and other grid maps where fish were recaptured outside the area.
- 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.