

## CAPRICORN COAST REVIEW JUNE 2025

### INFORMATION RATING



Key species: Barramundi, Dusky Flathead, Barred Javelin, Red Emperor

Fish timeframe: 2016-2025 Jan-Jun

Fisher timeframe: 2021-2025 Jan-Jun

The Capricorn Coast fishery is in 2 parts. Estuary fishing is in small creek systems including Coorooman Creek, Causeway Lake, Ross Creek and Corio Bay. Offshore fishing for both pelagic and reef species with the focus around the Keppel Islands and islands off Emu Park.

Fisher activity in 2025 has followed a similar pattern to that of the last few years. Each year fishing in the creeks is influenced by the Barramundi season. There is a peak in activity in Feb at the start of the season and also in Oct at the end of the season and the fishing pressure for Barramundi is high with a recapture rate of 20.4%.

The Capricorn Coast is mostly a local fishery with 90% of fishers recapturing fish being from the local coast area and Rockhampton with most visiting fishers coming from Central and SE Qld. The fishery is mostly a harvest fishery with over 60% of legal key species recaptured being kept.

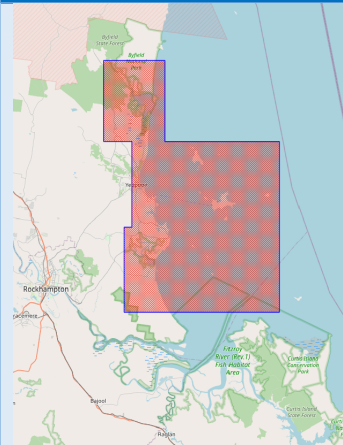
Key species in the estuaries are Barramundi, Flathead and Javelin accounting for 54% of the fish tagged. Following the introduction of the Net Free Zone in late 2015 there was a surge in Barramundi tagged and recaptured from 2016-2018 with an increase in effort however that dropped off in 2020 due to the impact of Covid restrictions and remains lower. This could be a reflection of a reduction in the population with limited recruitment and/or a high harvest rate.

There has been an upsurge in the tagging of trophy Barramundi following the introduction of live scope sounder technology making it easier to find and target these fish. The tag rate for trophy Barramundi has risen from 2% in 2022 to 27% so far this year.

Barramundi is the only species where there have been recaptures outside the area with 2 fish being recaptured to the north and 3 fish recaptured to the south in the Fitzroy River.

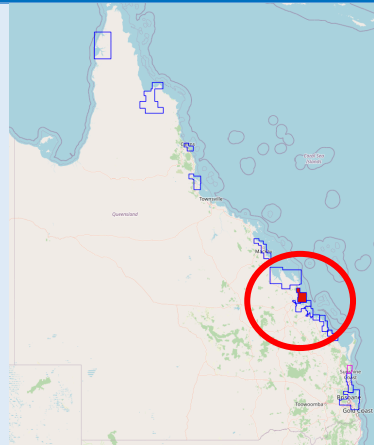
Red Emperor, Coral Trout, Saddletail Snapper, and Crimson Snapper are key reef species where most of the legal catch is retained. Around the Keppel Islands is a key area for juvenile Red Emperor. It is likely that they move to deeper water as they mature as it is rare for legal sized fish to be recaptured around the islands. While the recapture rate for this species is high at 16.5% no legal sized fish have been recaptured. Red Emperor is a reef species that has a high survival rate on release with several fish being recaptured more than once.

## CAPRICORN COAST



Yeppoon  
23.13°S  
129.74°E

## LOCATION



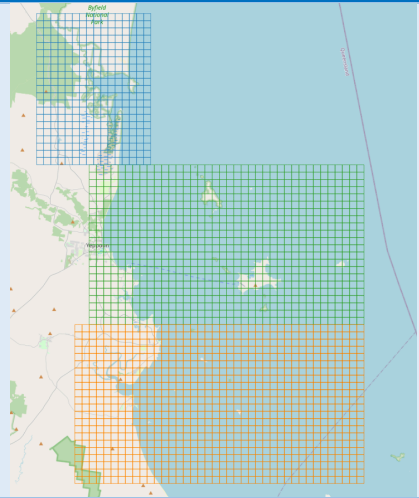
## WATERWAYS

**Capricorn Coast**  
**Grid maps**  
**Corio Bay (CBY) blue**  
**Keppel Bay (KBY) green**  
**Emu Park (EMP) orange**

## ACTUAL

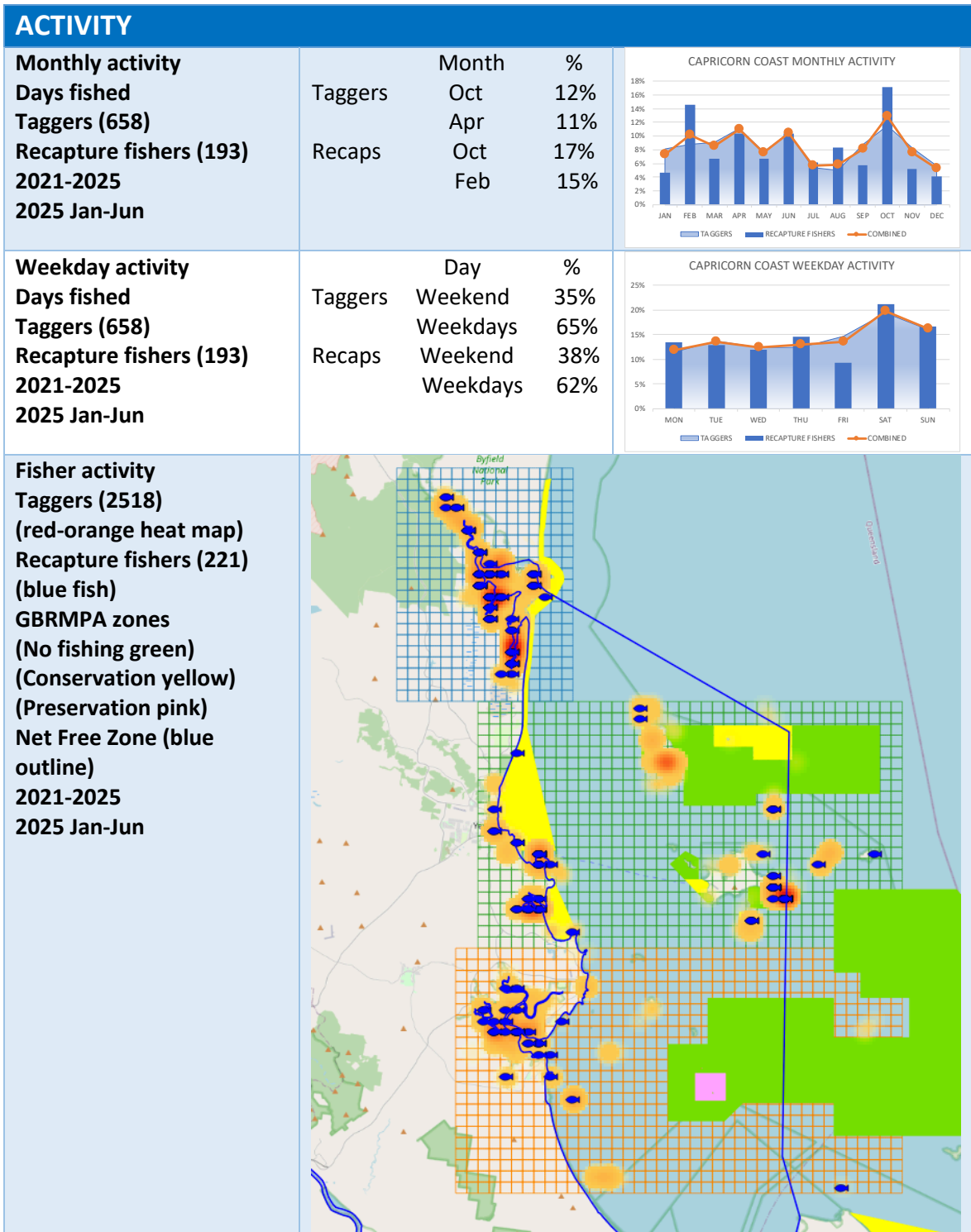
Corio Bay and creeks  
Ross Creek  
Causeway Lake  
Kinka Creek  
Coorooman Creek  
Pumpkin Creek  
Keppel Bay  
Keppel Islands

## GRAPH or MAP



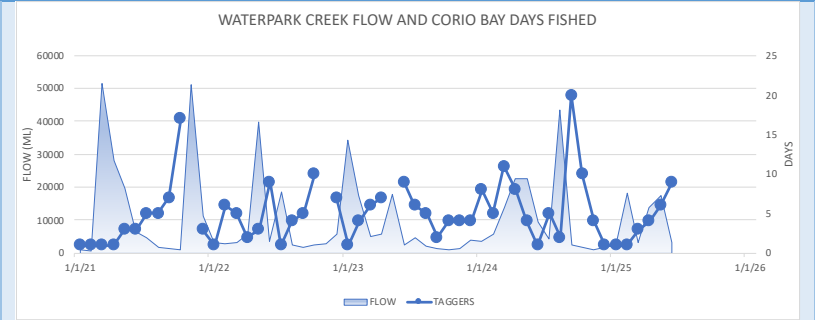
ENVIRONMENTAL	ACTUAL	GRAPH or MAP																		
<b>Capricorn Coast (Yeppoon)</b> <b>Mean monthly rainfall and temperature</b> <b>All years</b>	<table> <tr> <td>Rainfall</td><td>Month</td><td>mm</td></tr> <tr> <td>High</td><td>Feb</td><td>171</td></tr> <tr> <td></td><td>Mar</td><td>149</td></tr> <tr> <td>Temp</td><td>Month</td><td>oC</td></tr> <tr> <td></td><td>Jan</td><td>29</td></tr> <tr> <td></td><td>Feb</td><td>29</td></tr> </table>	Rainfall	Month	mm	High	Feb	171		Mar	149	Temp	Month	oC		Jan	29		Feb	29	<p>CAPRICORN COAST MEAN MONTHLY RAINFALL</p> <p>This dual-axis line graph shows the mean monthly rainfall (mm) and temperature (oC) for the Capricorn Coast. The x-axis represents the months from January to December. The left y-axis represents rainfall in mm (0 to 180), and the right y-axis represents temperature in oC (0 to 35). Rainfall is shown as a blue area chart, and temperature is shown as an orange line. Rainfall peaks in February at 171 mm, while temperature peaks in January at 29 oC.</p>
Rainfall	Month	mm																		
High	Feb	171																		
	Mar	149																		
Temp	Month	oC																		
	Jan	29																		
	Feb	29																		
<b>Waterpark Creek (Corio Bay) flows (ML)</b> <b>2021-2025</b>		<p>WATERPARK CREEK FLOW (ML)</p> <p>This area chart shows the flow in ML for Waterpark Creek from January 2021 to January 2026. The x-axis shows dates from 1/1/21 to 1/1/26. The y-axis shows flow in ML (0 to 60,000). The blue area represents the flow, and the orange line represents the mean flow. The flow shows significant seasonal variation with peaks in late summer/autumn.</p>																		
<b>Capricorn Coast (Yeppoon)</b> <b>Mean monthly rainfall (mm)</b> <b>Monthly rainfall (mm)</b> <b>2021-2025</b>		<p>YEPPOON RAINFALL (MM)</p> <p>This dual-axis chart shows the mean monthly rainfall (mm) and monthly rainfall (mm) for Yeppoon from January 2021 to January 2026. The x-axis shows dates from Jan-21 to Jan-26. The left y-axis represents rainfall in mm (0 to 300). The blue area represents the monthly rainfall, and the orange line represents the monthly mean rainfall. The mean rainfall peaks in February at 171 mm.</p>																		

FISHERS		ACTUAL		GRAPH or MAP					
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	384	664		
	Confidence	80%	80%	90%	90%	95%	99%		
	Error	20%	10%	10%	5%	5%	5%		
TYPE OF FISHERY									
Seasonality Mean rainfall (mm) Temperature (oC) Days fished combined Taggers Recapture fishers 2021-2025	Months most effort Fishers combined Oct Apr  (Oct last month of Barramundi open season)								
Harvest or experiential fishery Release rate of recaptured legal fish of key species 2021-2025 2025 Jan-Jun	Barramundi and Flathead legal fish kept rate Legal fish 153 Kept 96 (63%) Released 57 (37%)								
Local or visitor fishery Where recapture fishers live 2021-2025 2025 Jan-Jun	Recapture fishers 218 Local 196 (90%) Visitor 22 (10%)								
Gender of recapture fishers (ex-taggers) 2021-2025 2025 Jan-Jun	Recaptures 131 Male 122 (93%) Female 9 (7%)								

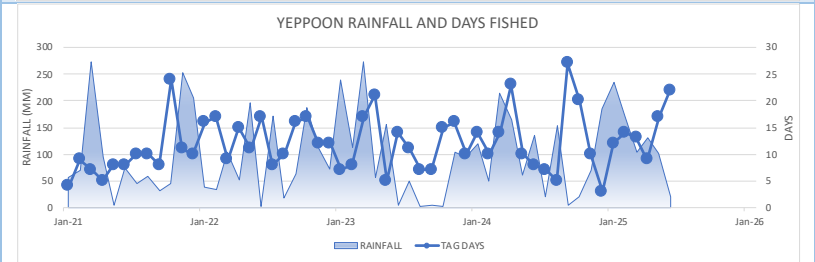


**EFFORT**

**Fisher effort**  
**Corio Bay only**  
**Waterpark Creek flow**  
**(ML)**  
**Days fished**  
**Taggers**  
**2021-2025**  
**2025 Jan-Jun**

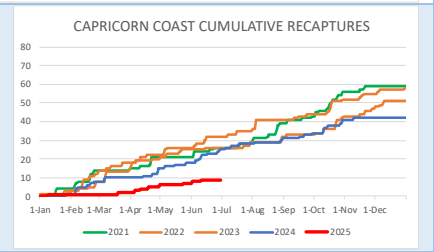


**Fisher effort**  
**Capricorn Coast**  
**Yeppoon rainfall (mm)**  
**Days fished**  
**Taggers**  
**2021-2025**  
**2025 Jan-Jun**



**Cumulative recaptures**  
**2021-2025**  
**2025 Jan-Jun**

Year	Recaps
2021	59
2022	58
2023	51
2024	42
2025 Jan-Jun	9

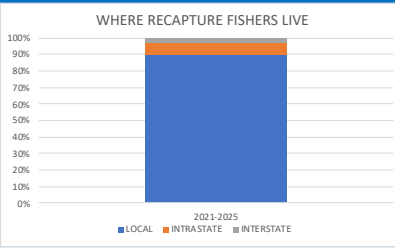


TRAVEL		
Cumulative distance (km) home to recapture location 2021-2025 2025 Jan-Jun	Year	Km
	2021	4386
	2022	6592
	2023	1684
	2024	9501
	2025 Jan-Jun	197
Distance (km) home to recapture location 2021-2025 2025 Jan-Jun		
Distance (km) home to recapture location Bars show distance range Dots show outliers 2021-2025 2025 Jan-Jun	Local Intrastate Interstate	Range (km) 1-59 62-1200 1117-3605
Average distance (km) from home to recapture location 2021-2025 2025 Jan-Jun	Local Intrastate Interstate	Av distance (km) 29 363 1818

# WHERE RECAPTURE FISHERS LIVE

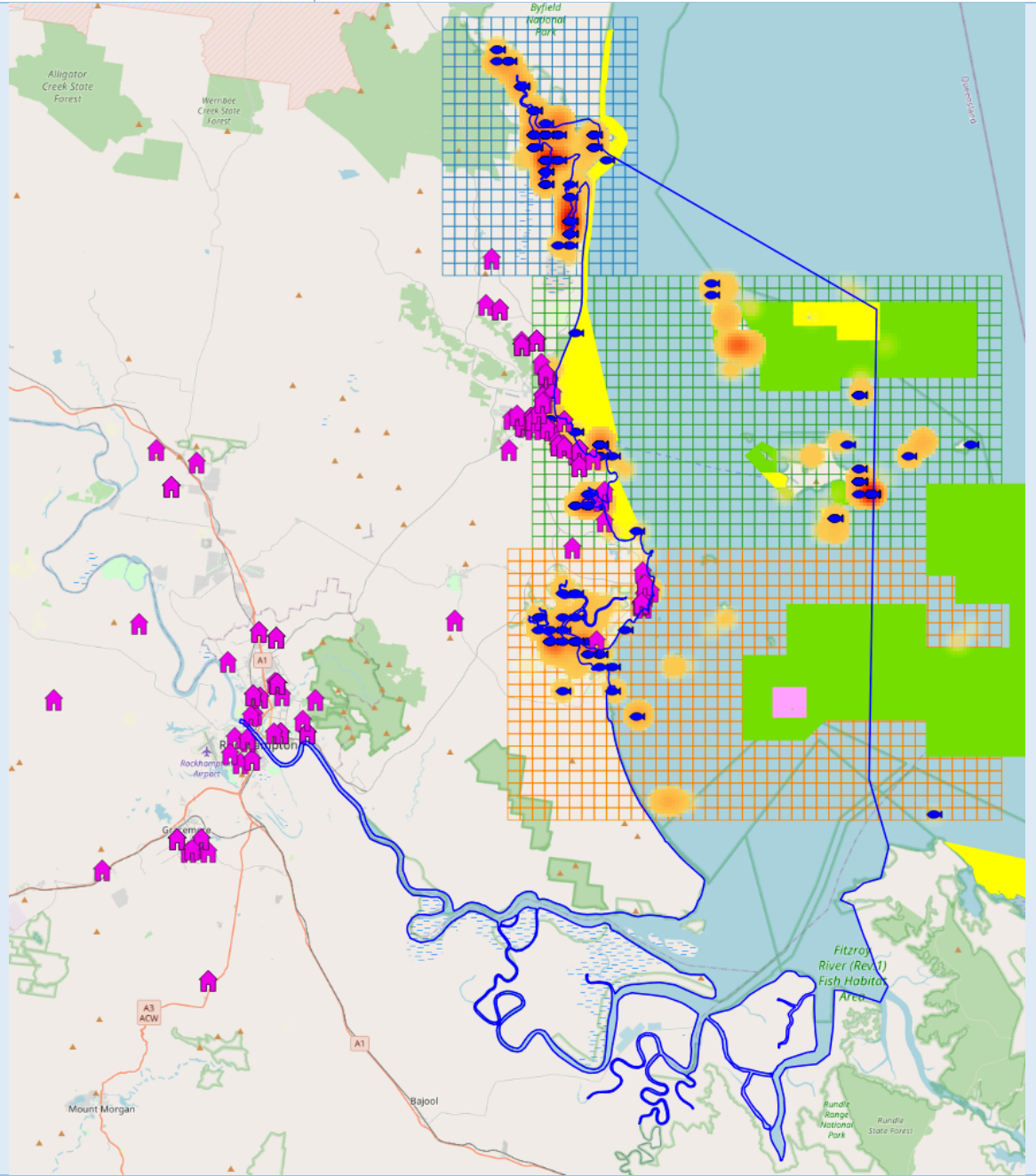
Where recapture fishers live  
2021-2025  
2025 Jan-Jun

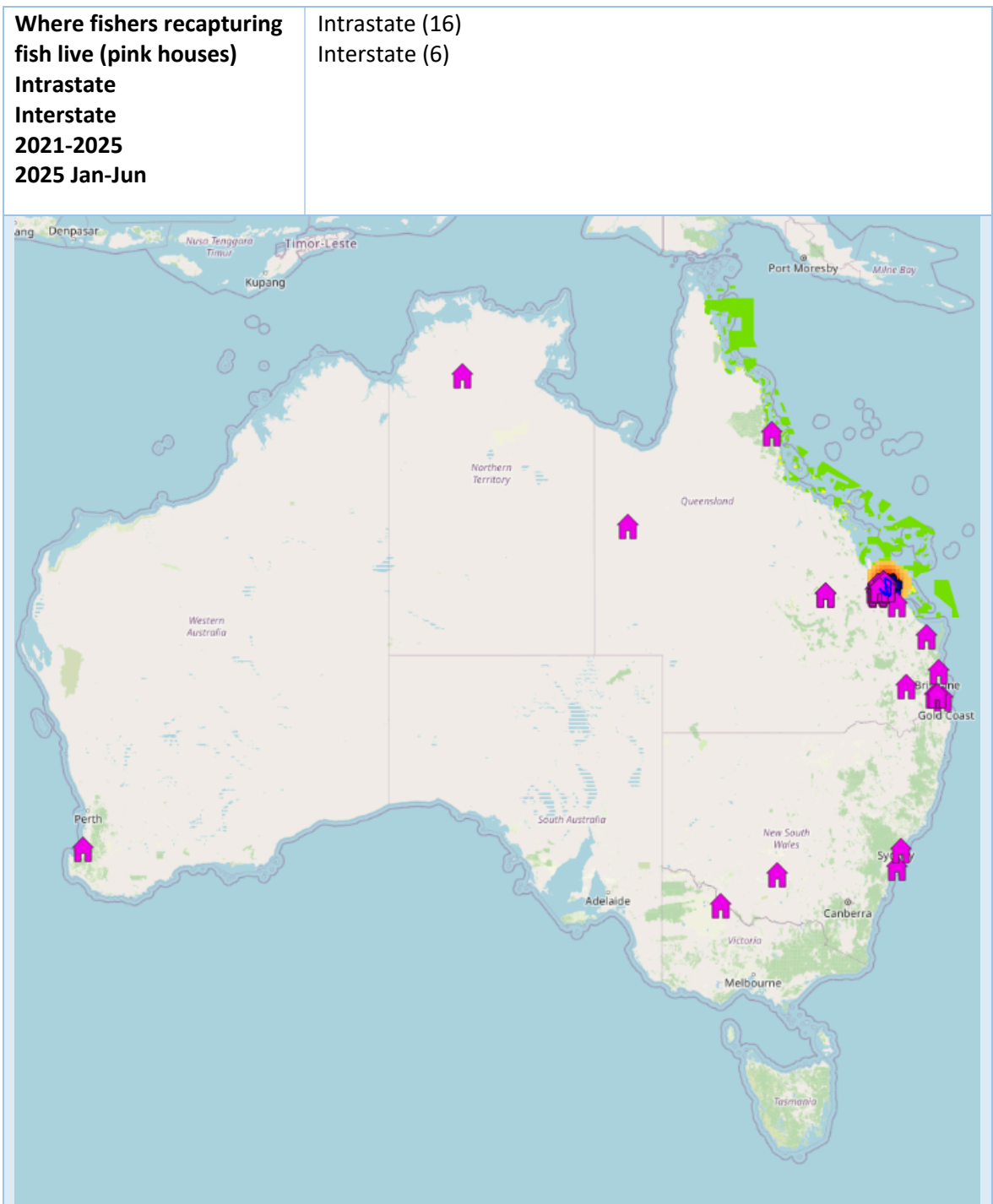
Recapture fishers	218
Local	196 (90%)
Intrastate	16 (7%)
Interstate	6 (3%)





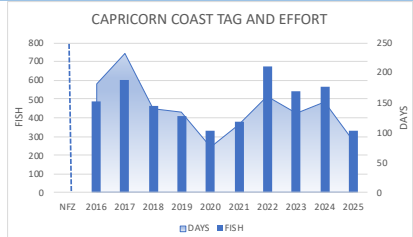
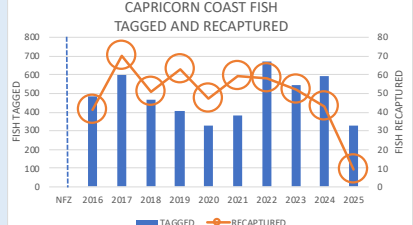
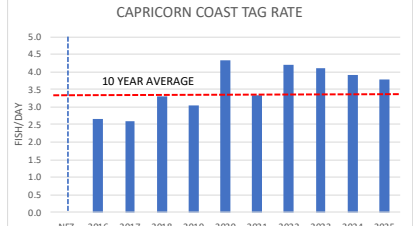


Where fishers recapturing fish live (pink houses)  
Local  
2021-2025  
2025 Jan-Jun

Local (196)





FISH				
BARRAMUNDI		DUSKY FLATHEAD		BARRED JAVELIN
				
RED EMPEROR				
				
TAG AND TAG RATE				
Tag and effort taggers number of tagged fish days fished 2016-2025 2025 Jan-Jun	High	Low	Now	
	Tagged fish		2017	2025
	599		329	329
	Days		2017	2025
	232		76	87
Fish tagged and recaptured 2016-2025 2025 Jan-Jun	Tagged	Recaptured		
	4804	493		
	Recapture rate 10.3%			
Tag rate All tagged fish Fish/day 2016-2025 2025 Jan-Jun	High	Low	Now	
	Tag rate		2020	2025
	4.3		2.6	3.8
10 year average		3.4		
				
				
				

SPECIES			
Species composition Numbers tagged 2016-2025 2025 Jan-Jun	Barramundi	1173	
	Flathead	613	
	Javelin	523	
	Emperor	267	
	Other species	2228	
Species composition Percentage tagged 2016-2025 2025 Jan-Jun	Barramundi	24%	
	Flathead	13%	
	Javelin	11%	
	Emperor	6%	
	Other species	46%	

FATE

Legal recaptures Recfishers (ex-taggers) Kept Released 2016-2025 2025 Jan-Jun		Legal	Kept
	Barramundi	128	77 (60%)
	Flathead	25	19 (76%)
	Javelin	0	
	Red Emperor	0	

LEGAL FISH KEPT OR RELEASED

Fish Species	Kept (%)	Released (%)
BARRAMUNDI	60%	40%
FLATHEAD	76%	24%

## LOCATIONS

All fish

Tagged (4804)

(red-orange heat map)

Recaptured (493)

(blue fish)

GBRMPA zones

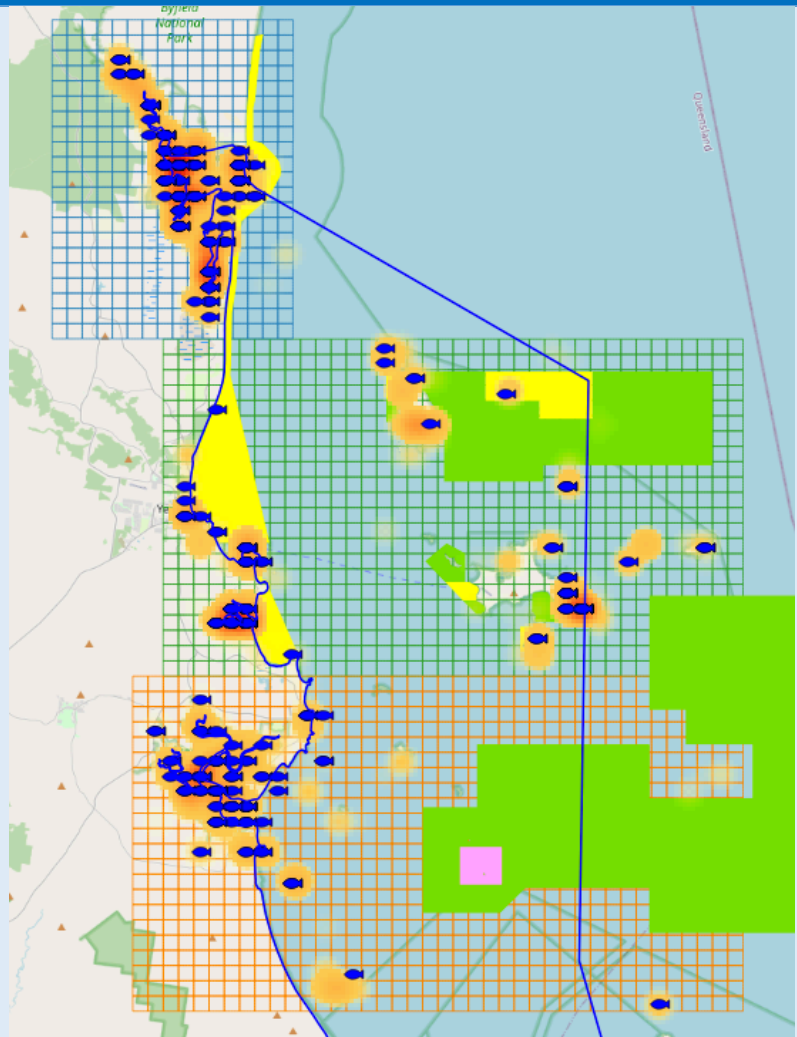
(No fishing green)


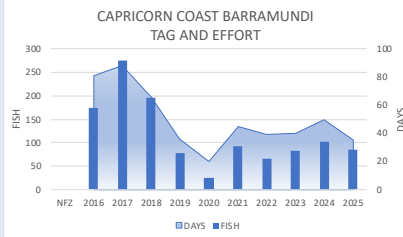
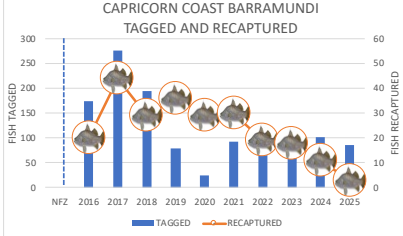
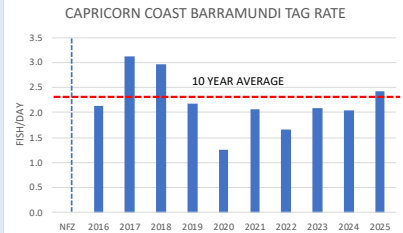
(Conservation yellow)

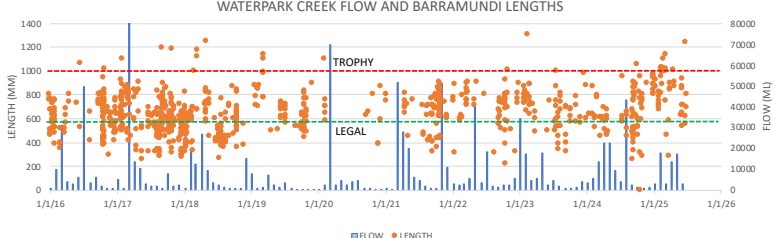
Net Free Zone (blue  
outline)

2016-2025

2025 Jan-Jun



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>95%</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%	95%	Error	20%	10%	10%	5%		
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2021-2025																									
TAGGED AND TAG RATE																									
Tag and effort taggers number of tagged fish days fished		High	Low	Now																					
2017		2020	2025																						
275		25	85																						
2021-2025																									
2025 Jan-Jun		Days																							
		2017	2020	2025																					
		88	20	35																					
Barramundi tagged and recaptured from each tag year		High	Low	Now																					
2016-2025		Tagged																							
2017		2020	2025																						
275		25	85																						
2025 Jan-Jun		Total	Recaps																						
		1173	239 (20.4%)																						
Tag rate		High	Low	Now																					
Barramundi		Tag rate																							
Fish/day		2017	2020	2025																					
2016-2025		3.1	1.3	2.4																					
2025 Jan-Jun		10 year average	0.95																						

TAG TIMELINE	
Waterpark Creek flow and Barramundi lengths (Corio Bay only)	
2016-2025	
2025 Jan-Jun	
	

## LENGTHS

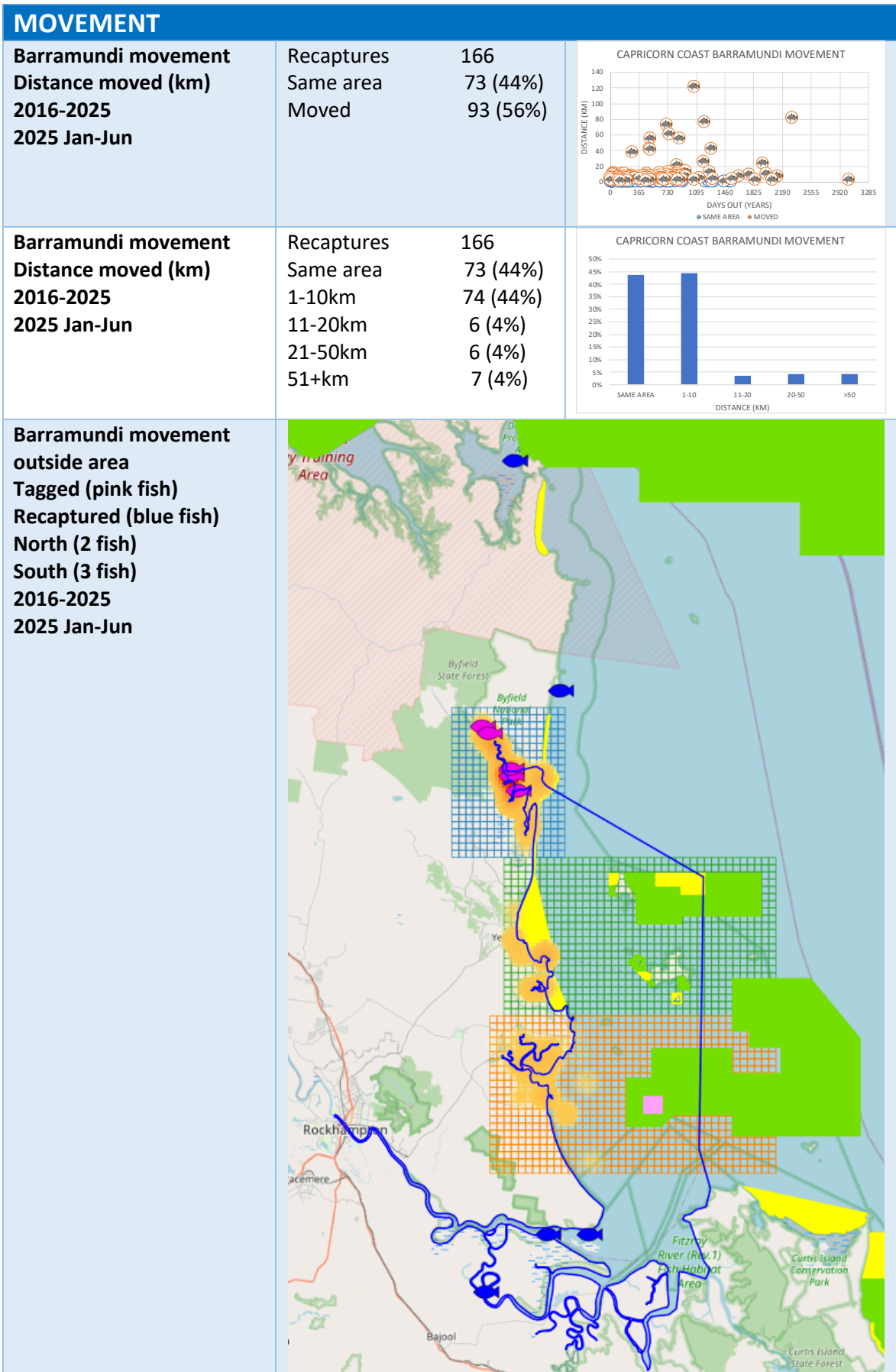
<b>Average length (mm)</b> <b>Bars show length range</b> <b>Dots show outliers</b> <b>2016-2025</b> <b>2025 Jan-Jun</b>	High	Low	Now	
	Average length			
	2021	2018	2025	
	684	581	886	
	Max			
<b>Fish lengths percentage</b> <b>Undersize &lt;580mm</b> <b>Legal 580-1000mm</b> <b>Trophy 1000+mm</b> <b>2016-2025</b> <b>2025 Jan-Jun</b>	High	Low	Now	
	Legal-Trophy			
	2021	2018	2025	
	81%	46%	68%	
	Trophy			
<b>2025 Jan-Jun</b>	2024	2021	2025	
	12%	1%	27%	

## SURVIVAL

<b>Barramundi survival based on recaptures by years out after tagging</b> <b>All years</b>	Year	Recaptures	
	1	430	
	5	41	
	10	1	
	Longest time out (years)	9.1	
<b>Barramundi survival rate per year</b> <b>All years</b>	Average survival rate per year	0.54 (54%)	

## GROWTH

<b>Barramundi growth at the end of each year based on recaptures of fish tagged &lt;580mm</b> <b>2016-2025</b> <b>2025 Jan-Jun</b>	Recaptures	68	
	Growth (mm)		
	Year 1	112	
	Year 2	210	
	Year 3	267	
	Year 4	308	
<b>2025 Jan-Jun</b>	Year 5	339	



## LOCATIONS

Barramundi

Tagged (1173)

(red-orange heat map)

Recaptured (239)

(blue fish)

GBRMPA zones

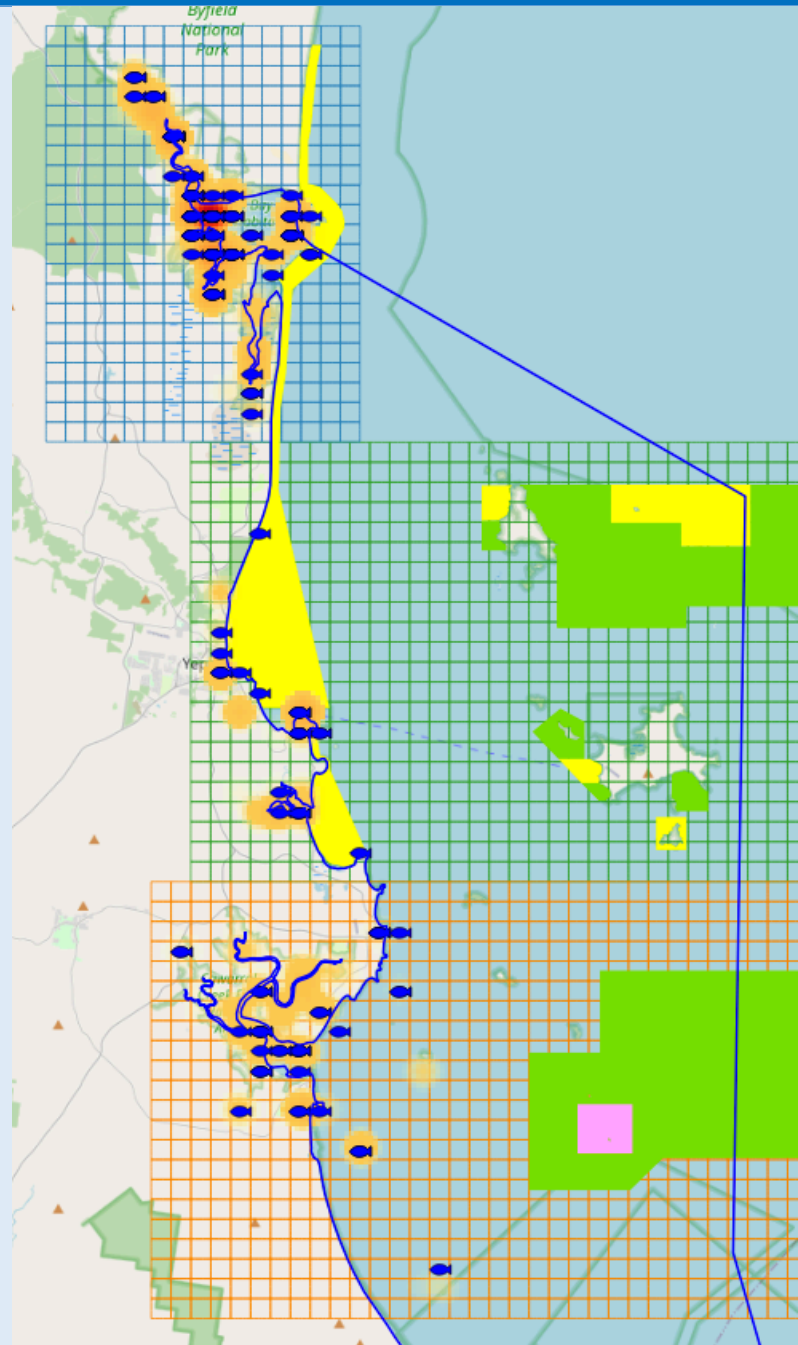
(No fishing green)


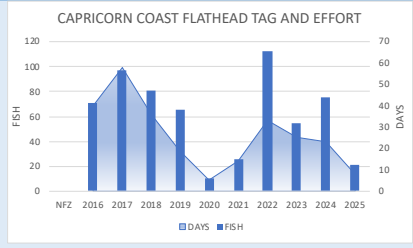
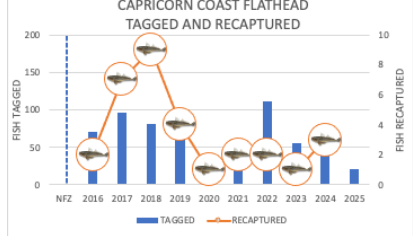
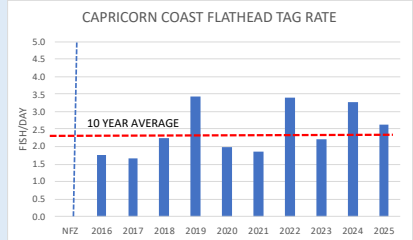
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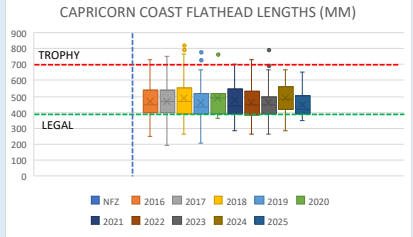
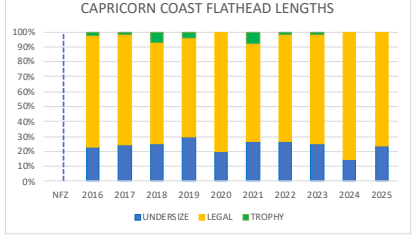
Net Free Zone (blue  
outline)

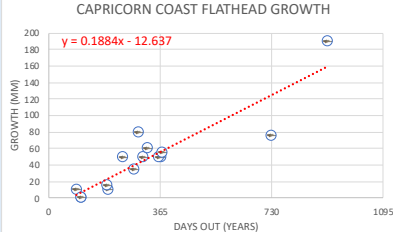
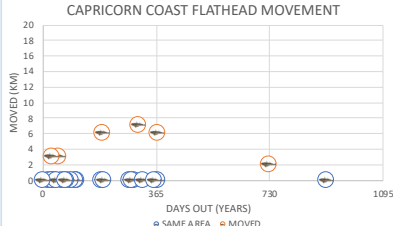
2016-2025

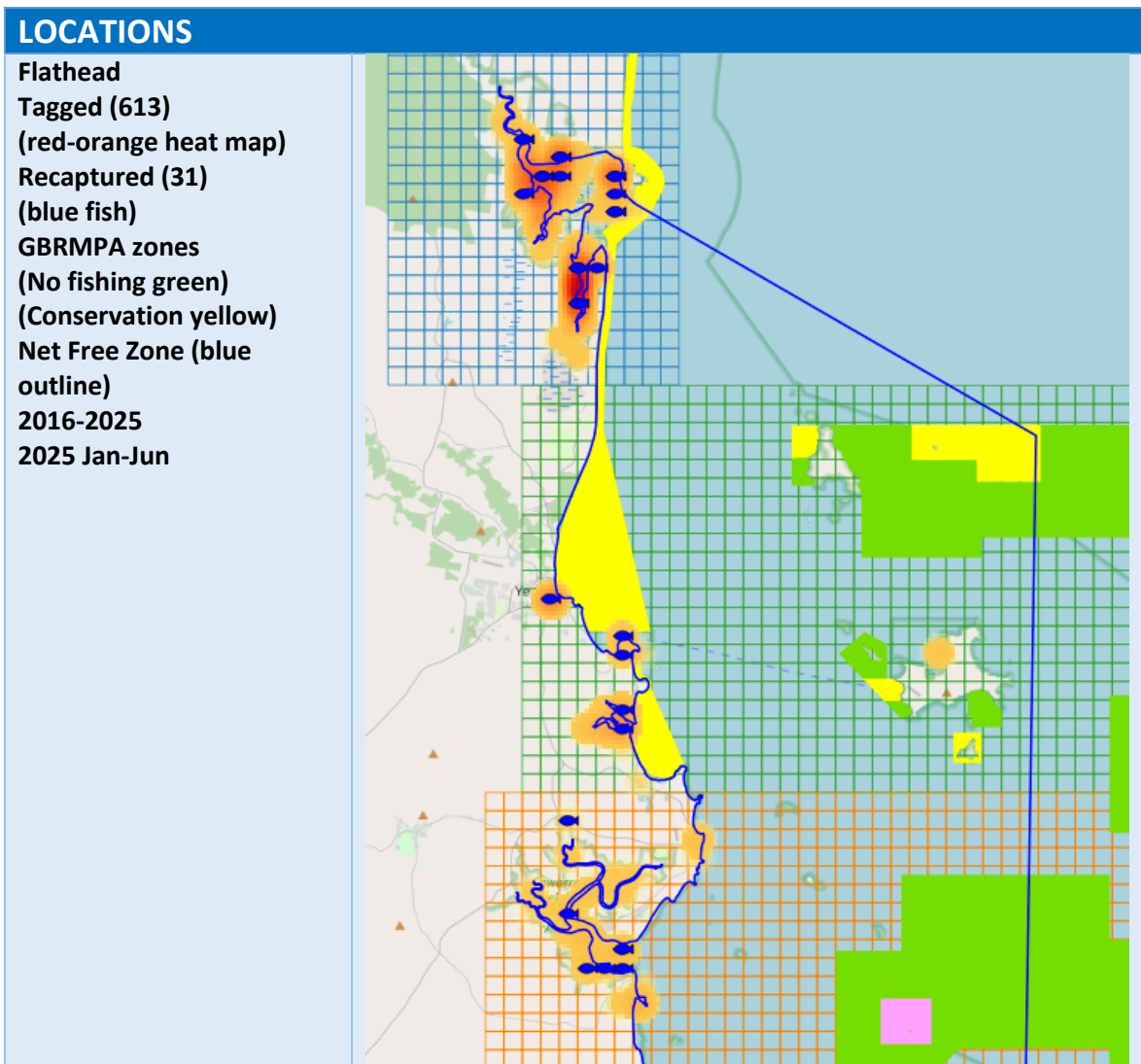
2025 Jan-Jun




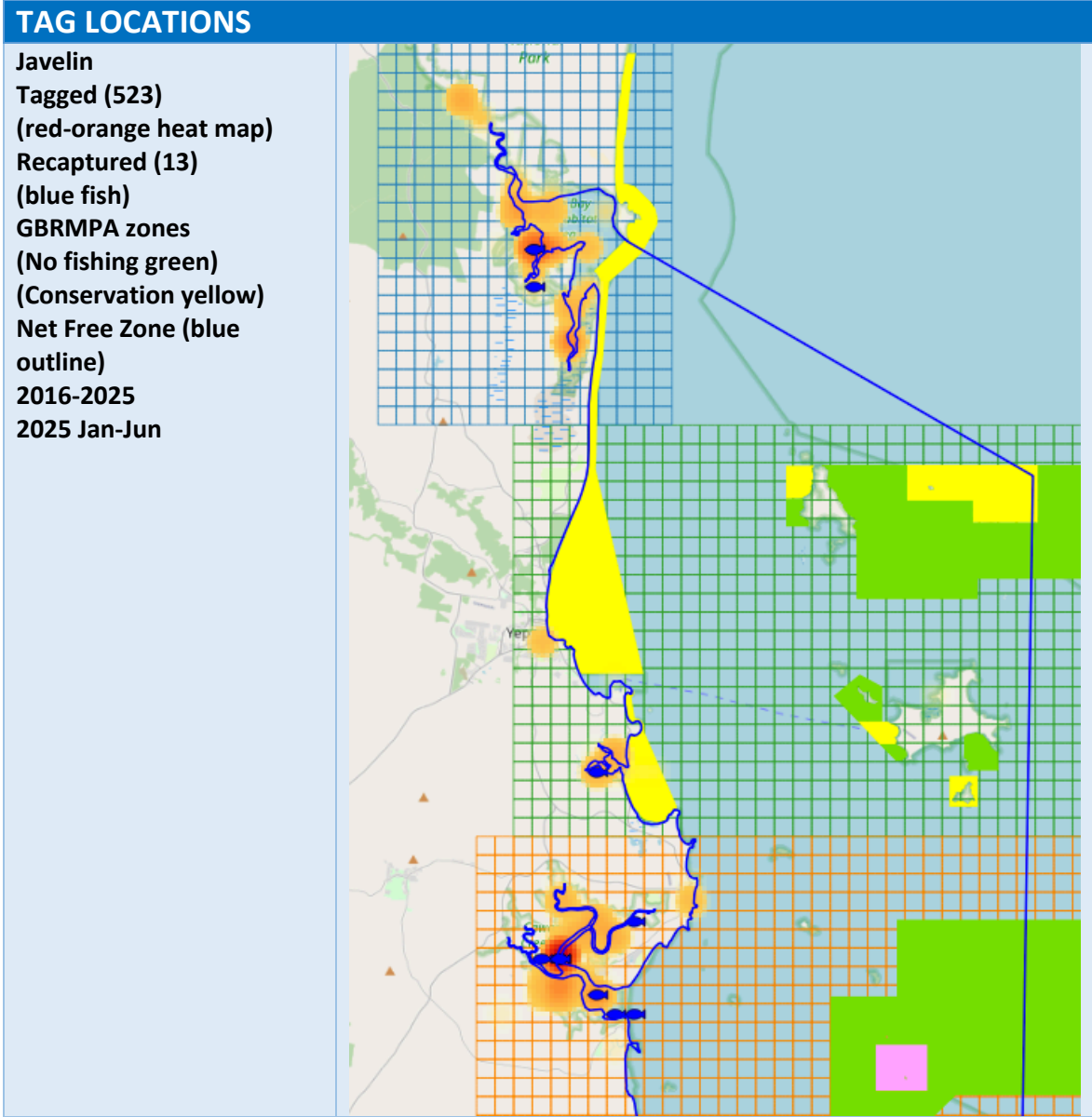
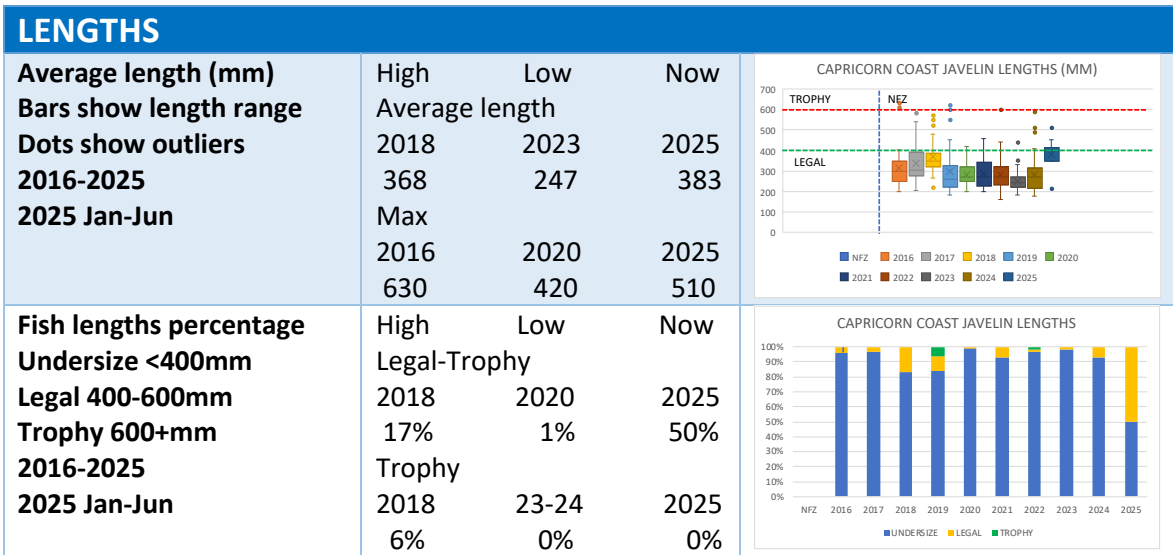
FLATHEAD	ACTUAL		GRAPH or MAP																					
																								
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	Total	Recaps																						
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LENGTHS																							
<b>Average length (mm)</b> <b>Bars show length range</b> <b>Dots show outliers</b> <b>2016-2025</b> <b>2025 Jan-Jun</b>	<table> <tr><td>High</td><td>Low</td><td>Now</td></tr> <tr><td>Average length</td><td></td><td></td></tr> <tr><td>2020</td><td>2019</td><td>2025</td></tr> <tr><td>488</td><td>458</td><td>447</td></tr> <tr><td>Max</td><td></td><td></td></tr> <tr><td>2018</td><td>2024</td><td>2025</td></tr> <tr><td>820</td><td>670</td><td>650</td></tr> </table>	High	Low	Now	Average length			2020	2019	2025	488	458	447	Max			2018	2024	2025	820	670	650	
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Legal-Trophy																							
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2021	2024	2025																					
8%	0%	0%																					

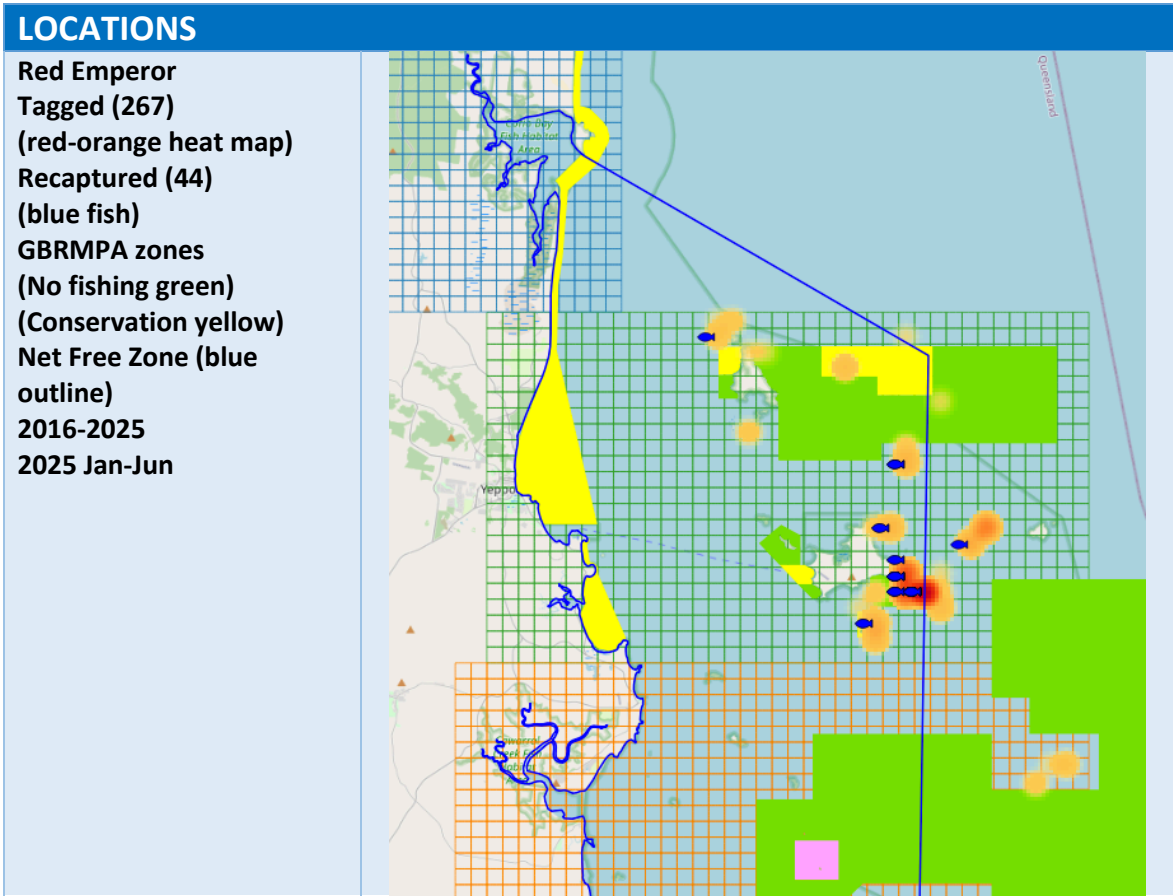
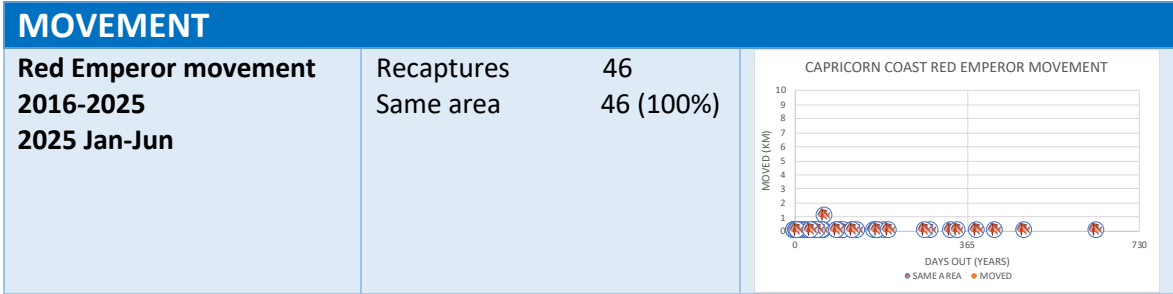
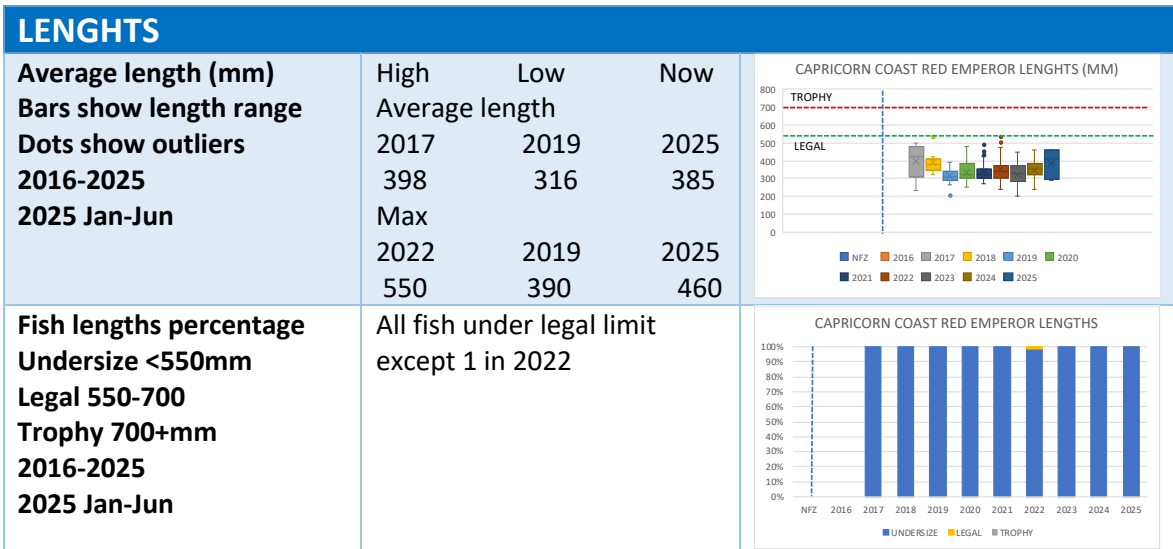
GROWTH			
Flathead growth at the end of each year based on recaptures of fish tagged <400mm 2016-2025 2025 Jan-Jun	Recaptures	15	
	Growth (mm)		
	Year 1	56	
	Year 2	125	
	Year 3	193	
MOVEMENT			
Flathead movement Distance moved (km) 2016-2025 2025 Jan-Jun	Recaptures	27	
	Same area	21 (78%)	
	Moved	6 (22%)	
	Max	7km	



JAVELIN		ACTUAL		GRAPH or MAP	
					
DATA RELIABILITY					
Sample size (fish/year)		Reliability level		MODERATE	
Tagged (blue arrow)		Samples		MODERATE	
Recaptures (orange arrow)		Confidence		95%	
Confidence %		Error		5%	
Error %				5%	
2021-2025					
TAGGED AND TAG RATE					
Tag and effort taggers		High		Low	
number of tagged fish		Tagged fish		Now	
days fished		2020		2021	
2016-2025		136		30	
2025 Jan-Jun		Days		2025	
		2024		2021	
		26		10	
				8	
Javelin tagged and		High		Low	
recaptured		Tagged		Now	
2016-2025		2020		2021	
2025 Jan-Jun		136		30	
		Total		Recaps	
		523		13 (2.5%)	
Tag rate		High		Low	
Javelin		Tag rate		Now	
Fish/day		2020		2017	
2016-2025		6.8		1.4	
2025 Jan-Jun				1.3	
		10 year average		3.0	



RED EMPEROR		ACTUAL		GRAPH or MAP	
					
DATA RELIABILITY					
Sample size (fish/year)		Reliability level		MODERATE	
Tagged (blue arrow)		Samples		MODERATE	
Recaptures (orange arrow)		Confidence		HIGH	
Confidence %		Error			
Error %					
2021-2025					
TAGGED AND TAG RATE					
Tag and effort taggers		High		Low	
number of tagged fish		Tagged fish		Now	
days fished		2023		2018	
2016-2025		81		2	
2025 Jan-Jun		Days		2025	
		2023		2018	
		22		1	
				3	
Red Emperor tagged and		High		Low	
recaptured		Tagged		Now	
2016-2025		2023		2018	
2025 Jan-Jun		81		2	
		Total		Recaps	
		267		44 (16.5%)	
Tag rate		High		Low	
Red Emperor		Tag rate		Now	
Fish/day		2023		2017	
2016-2025		3.7		1.2	
2025 Jan-Jun		10 year average		2.6	



## Data sources

Data used in the Capricorn Coast Crystal Bowl are:

- Tag records and recapture records for the Capricorn Coast at <http://crystalbowl.infofishaustralia.com.au/>.
- Creek flows for Waterpark Creek at Station 129001A at Byfield from <https://water-monitoring.information.qld.gov.au/>.
- Rainfall and temperature for Capricorn Coast from Station 33294 at Yeppoon 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/day for taggers with a minimum of 12 days (at least 1 per month) to provide an acceptable catch rate.
- For Barramundi undersized fish are <580mm, legal fish are ≥580 and <1000mm and trophy fish are ≥1000mm.
- For Dusky Flathead undersized fish are <400mm, legal fish are ≥400 and <700mm and trophy fish are ≥700mm.
- For Barred Javelin undersized fish are <400mm, legal fish are ≥400mm and <600mm and trophy fish are ≥600mm.
- For Red Emperor undersized fish are <550mm, legal fish are ≥550mm and <700 and trophy fish are ≥700mm.
- 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 maps CBY, KBY, and EMP for the Capricorn Coast.
- Movement distance calculated as the shortest distance by water from the tag to the recapture location.
- 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.