



HINCHINBROOK REVIEW 2025

INFORMATION RATING



Key species: Barramundi, Mangrove Jack, Goldspotted Rockcod, Blackspotted Rockcod, Barred Javelin

Fish timeframe: 2016-2025

Fisher timeframe: 2021-2025

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Product of Infofish Australia

Supported by Suntag, 4lb Club,
Department of Primary Industries

HINCHINBROOK OVERVIEW

Summary for 2025

- There were an additional 344 fish tagged with 11 recaptures in 2025.
- Fishing activity in the Hinchinbrook area is mostly limited to local fishers during the wet season.
- From winter to near the end of the year there is a surge in visiting fishers from along the east coast from Cairns to Victoria as it is a popular fishing destination.
- Hinchinbrook is a high harvest area for legal fish with around 73% of legal fish of key species caught by recreational fishers (ex-taggers) being kept.

The Hinchinbrook area includes Victoria Creek, Herbert River, Seymour River in the south and the Murray River in the north with several smaller short creeks in the middle section. Population centres include Lucinda and Ingham in the south, Cardwell in the middle and Tully in the north.

The area is part of the highest rainfall area in Queensland with most of the rain falling during the wet season from Dec-Apr. This year Cardwell received 1703mm of rain in Feb.

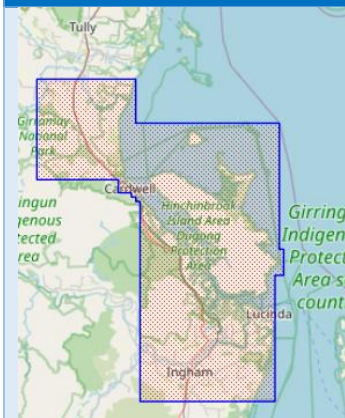
Tagging in the Hinchinbrook area has been continuous since the mid-1980 with taggers mostly targeting Barramundi and Mangrove Jack using lures, and even though taggers have changed the fishing methodology and target species have remained fairly consistent.

Tagging effort and numbers of fish tagged have remained steady with 400-600 fish tagged most years, however tagging effort fell away in 2023 due to some taggers moving to other locations. This resulted in a drop in the number of fish tagged. There has been an increase in tagging effort again this year.

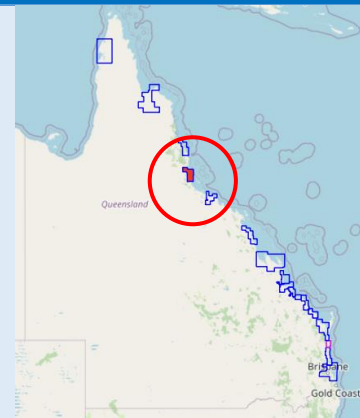
Hinchinbrook being a high harvest area is reflected in the high proportion of fish tagged being below legal length suggesting most fish are retained once they reach legal length. That is supported by lengths from the 4lb club competitions which are photo based with fish released, showing low levels of legal fish for most key species.

An assessment of fish condition and handling was made from photos collected during competitions and tagging. While the incidence of minor health issues was high it was very low for major issues which included fin damage, lesions and skin condition. For fish handling the incidence of bleeding and scale loss was moderate for minor issues and it was very low for major issues.

HINCHINBROOK LOCATION



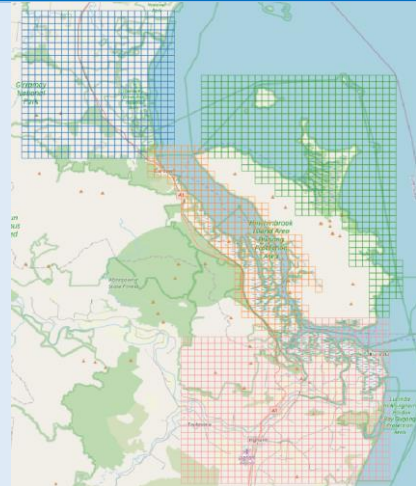
Cardwell
18.26°S
146.02°E
Ingham
18.65°S
146.16°E



WATERWAYS

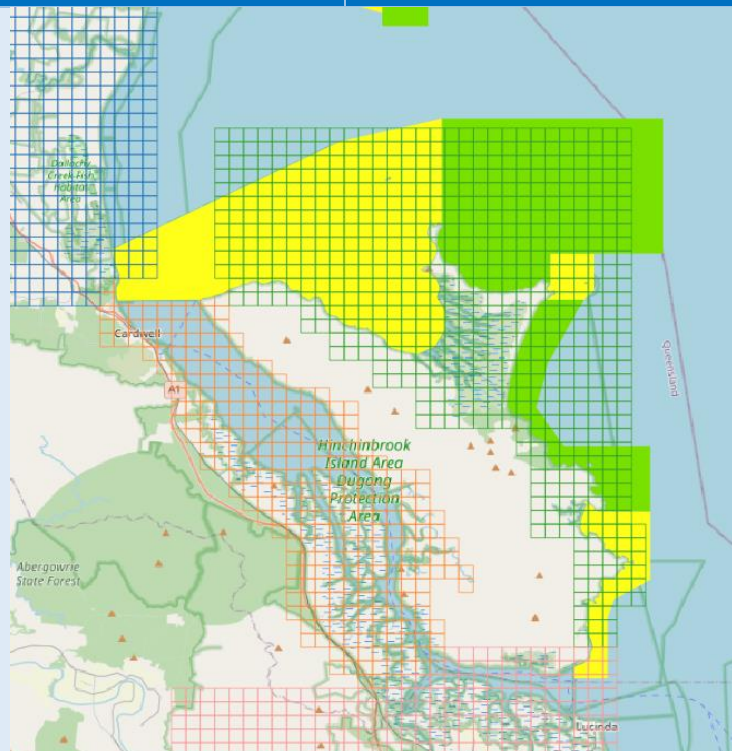
Grid maps
Murray River KR01
Hinchinbrook Channel HCC
Hinchinbrook Island HIC
Ingham IGH

Murray River
Dallachy Creek
Wreck Creek
Meunga Creek
Cardwell to Ingham
Hinchinbrook Channel
Hinchinbrook Island
Seymour River
Herbert River
Victoria Creek



GBRMPA ZONING

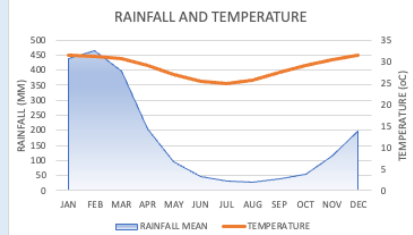
Conservation Park Zone
(yellow)
Marine National Park Zone
(green)



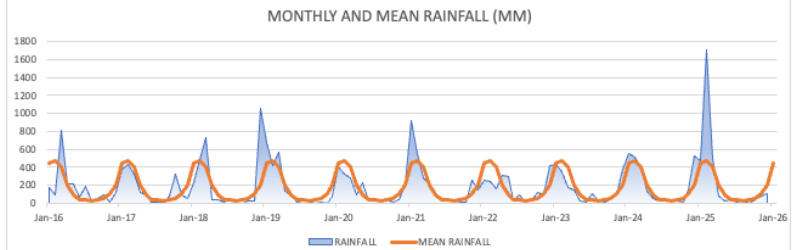
ENVIRONMENTAL CONDITIONS

Cardwell mean monthly rainfall (mm) and temperature (oC)
Wet season Dec-Apr

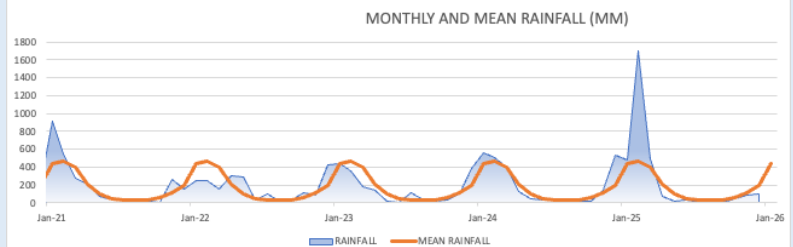
Rainfall	Month	mm
High	Feb	463
	Jan	440
Temp	Month	oC
	Dec-Feb	31



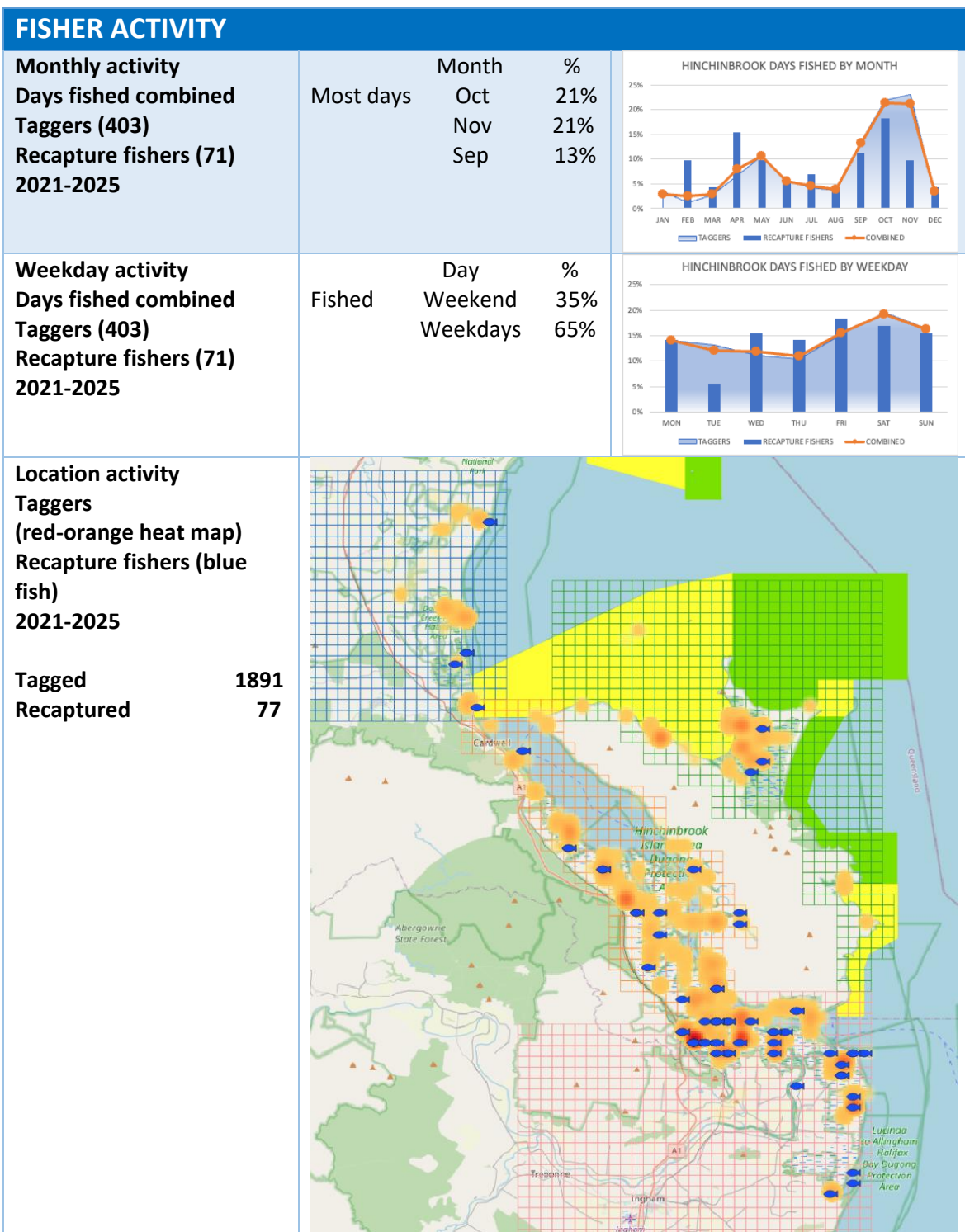
Cardwell monthly and mean rainfall (mm) 2016-2025



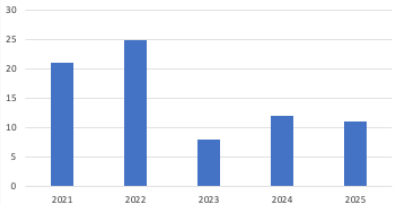
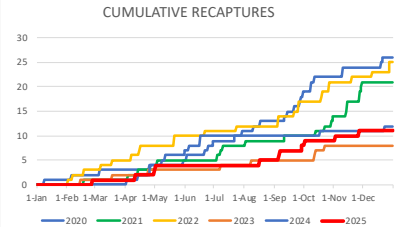
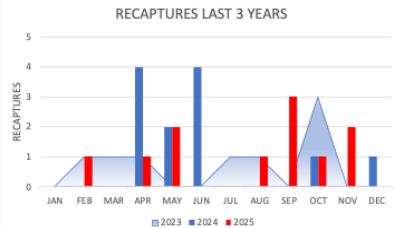
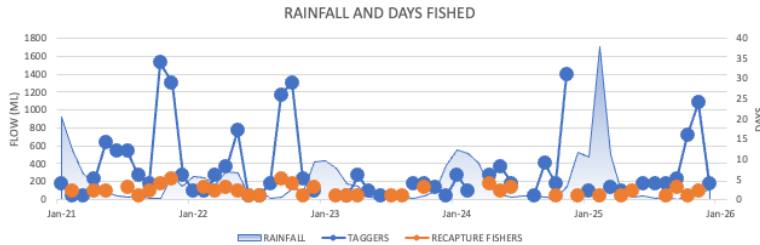
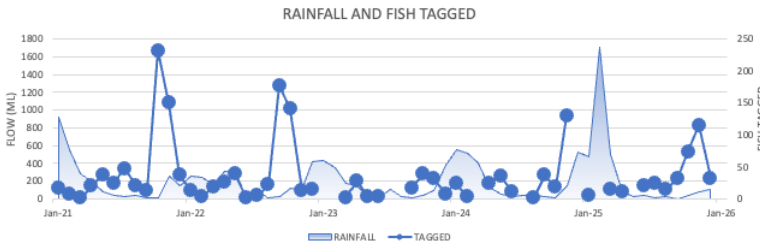
Cardwell monthly and mean rainfall (mm) 2021-2025



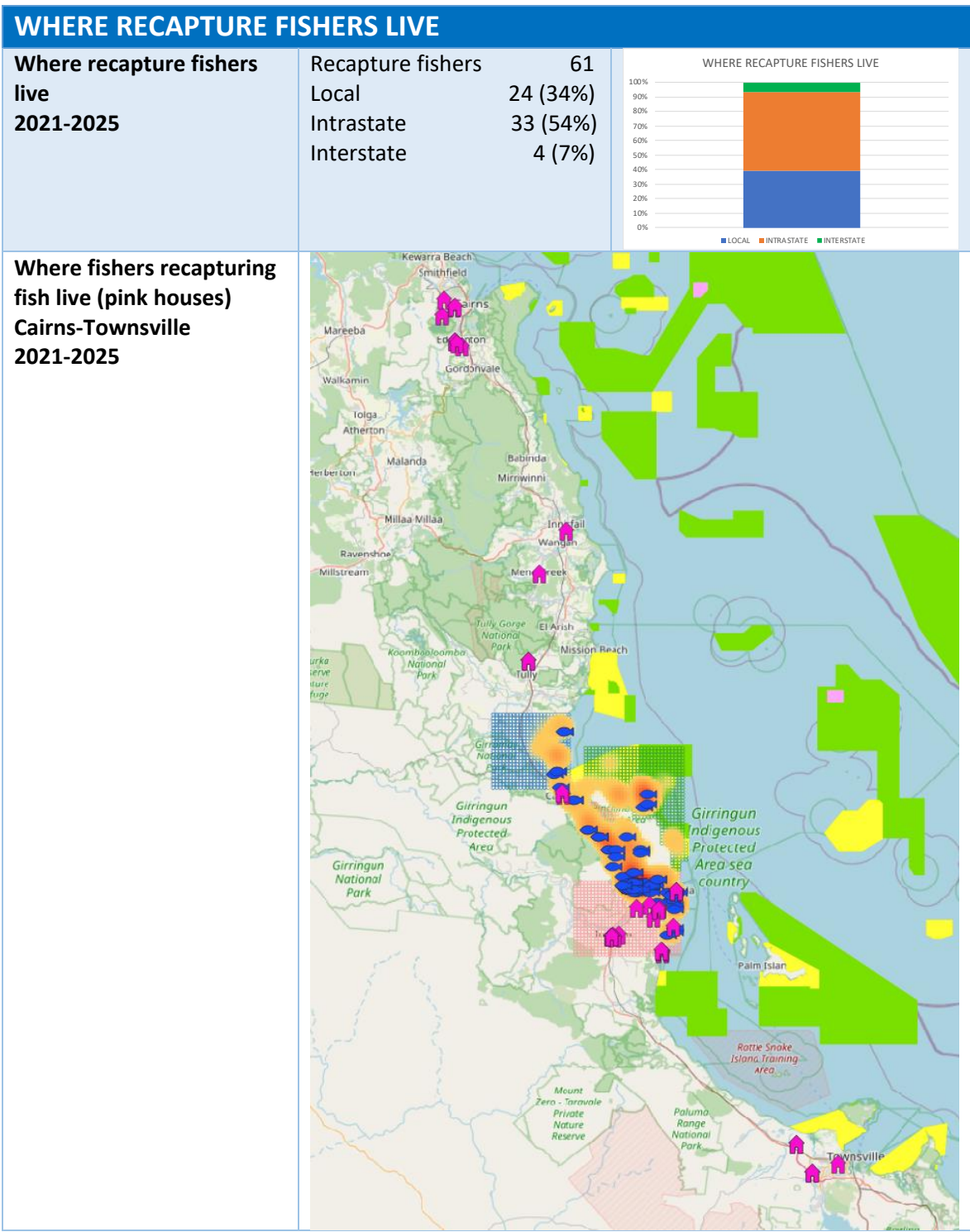
TYPE OF FISHERY																														
DATA RELIABILITY																														
Sample size (days fished) Tag days (blue arrow) Recaptures (orange arrow) Confidence % Error % 2021-2025	<table><tr><td>Reliability level</td><td>LOW</td><td></td><td>MODERATE</td><td>MODERATE</td><td></td><td>HIGH</td></tr><tr><td>Samples</td><td>10</td><td>41</td><td>68</td><td>271</td><td>384</td><td>664</td></tr><tr><td>Confidence</td><td>80%</td><td>80%</td><td>90%</td><td>90%</td><td>95%</td><td>99%</td></tr><tr><td>Error</td><td>20%</td><td>10%</td><td>10%</td><td>5%</td><td>5%</td><td>5%</td></tr></table> <div><div></div><div></div></div>	Reliability level	LOW		MODERATE	MODERATE		HIGH	Samples	10	41	68	271	384	664	Confidence	80%	80%	90%	90%	95%	99%	Error	20%	10%	10%	5%	5%	5%	
Reliability level	LOW		MODERATE	MODERATE		HIGH																								
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Error	20%	10%	10%	5%	5%	5%																								
Seasonality Average rainfall (mm) Mean maximum day temperature (oC)	Best Barramundi fishing Months Aug-Oct																													
Fishing seasonality Mean rainfall (mm) Mean temperature (oC) Days fished combined Taggers Recapture fishers 2021-2025	Months most activity Days fished Oct Nov Sep																													
Harvest or experiential fishery Release rate of recaptured legal fish of key species 2021-2025	Key species legal fish kept rate Legal fish 37 Kept 27 (73%) Released 10 (27%)																													
Local or visitor fishery Where recapture fishers live 2021-2025	Recapture fishers 61 Local 24 (39%) Visitors 33 (61%)																													
Gender of recapture fishers (ex-taggers) 2021-2025	Recaptures 58 Male 53 (91%) Female 5 (9%)																													



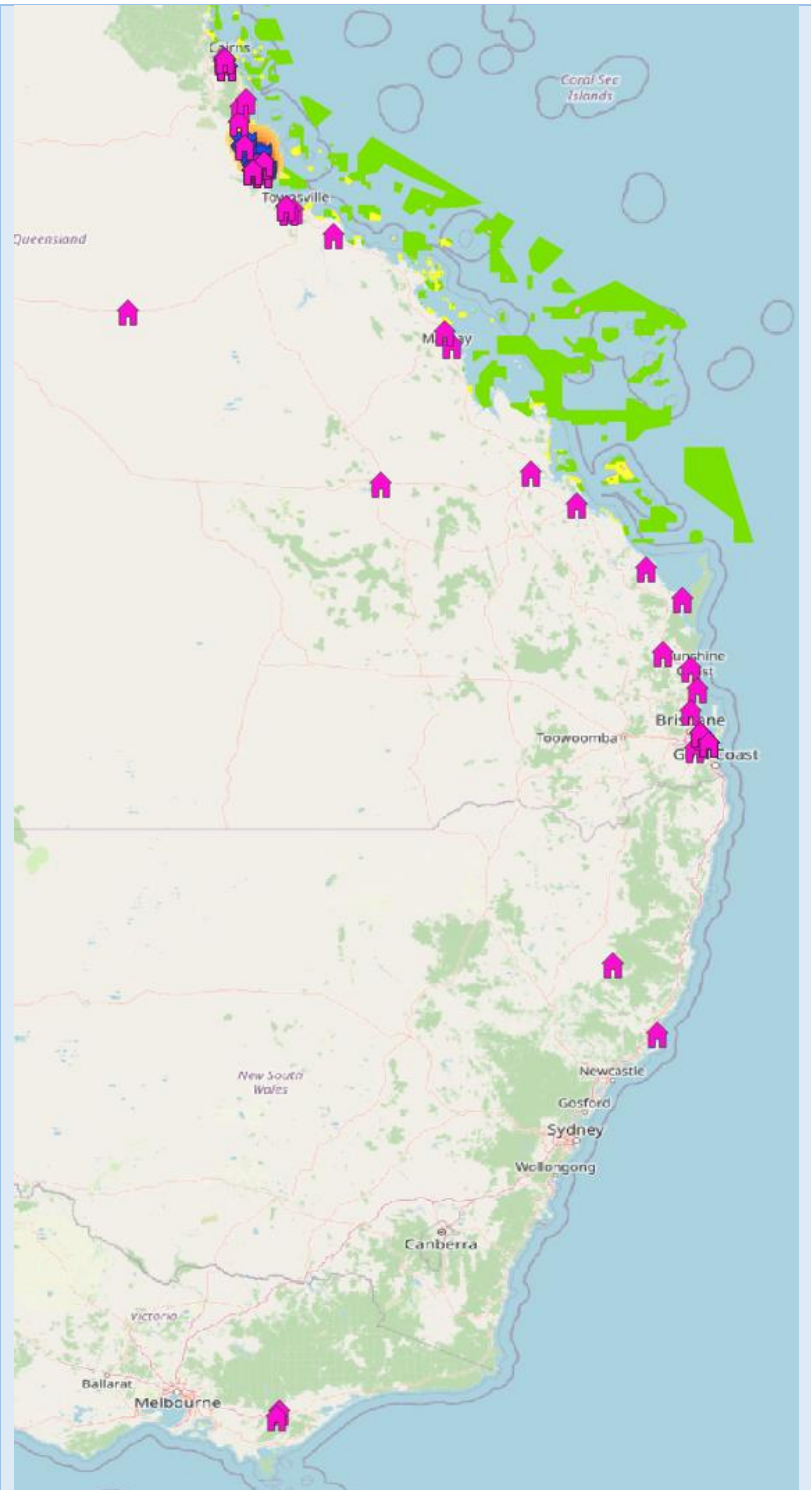
FISHER EFFORT






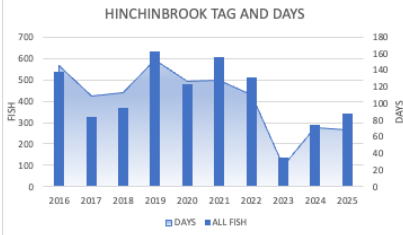
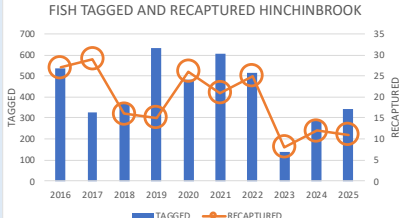
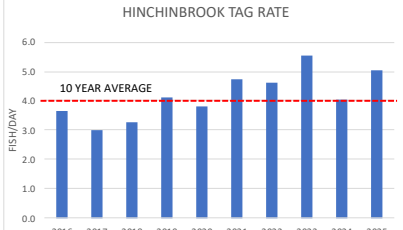
<div>Total recaptures 2021-2025</div>	<div><div>Year</div><div>2021</div><div>2022</div><div>2023</div><div>2024</div><div>2025</div></div> <div><div>Recaps</div><div>21</div><div>25</div><div>8</div><div>12</div><div>11</div></div>	<div><div>TOTAL RECAPTURES</div></div>
<div>Cumulative recaptures 2021-2025</div>		<div><div>CUMULATIVE RECAPTURES</div></div>
<div>Recaptures last 3 years 2023-2025</div>		<div><div>RECAPTURES LAST 3 YEARS</div></div>
<div>Cardwell rainfall and days fished by taggers and recapture fishers 2021-2025</div>	<div><div>RAINFALL AND DAYS FISHED</div></div>	
<div>Cardwell rainfall and fish tagged 2021-2025</div>	<div><div>RAINFALL AND FISH TAGGED</div></div>	

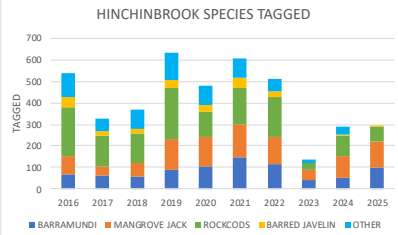
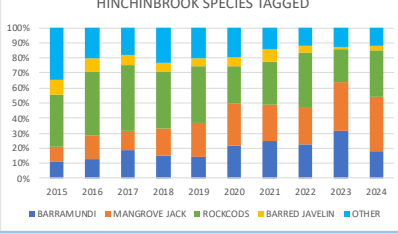
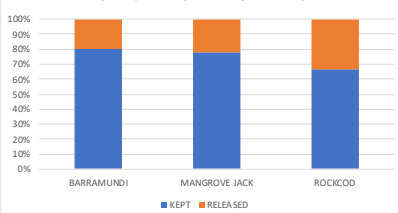
FISHER TRAVEL			
Total distance (km) address to recapture location 2021-2025	Year	Kms	
	2021	13648	
	2022	14163	
	2023	3971	
	2024	1195	
	2025	6274	
Cumulative distance (km) address to recapture location 2021-2025			
Distance (km) home to recapture location Bars show distance range Dots show outliers 2021-2025			
Average distance (km) home to recapture location 2021-2025	Av distance (km)		
	Local	19	
	Intrastate	704	
	Interstate	1880	
Distance (km) home to recapture location Bars show distance range Dots show outliers 2021-2025	Range (km)		
	Local	1-73	
	Intrastate	98-1532	
	Interstate	1246-2178	



Where all fishers
recapturing fish live (pink
houses)
East coast
2021-2025



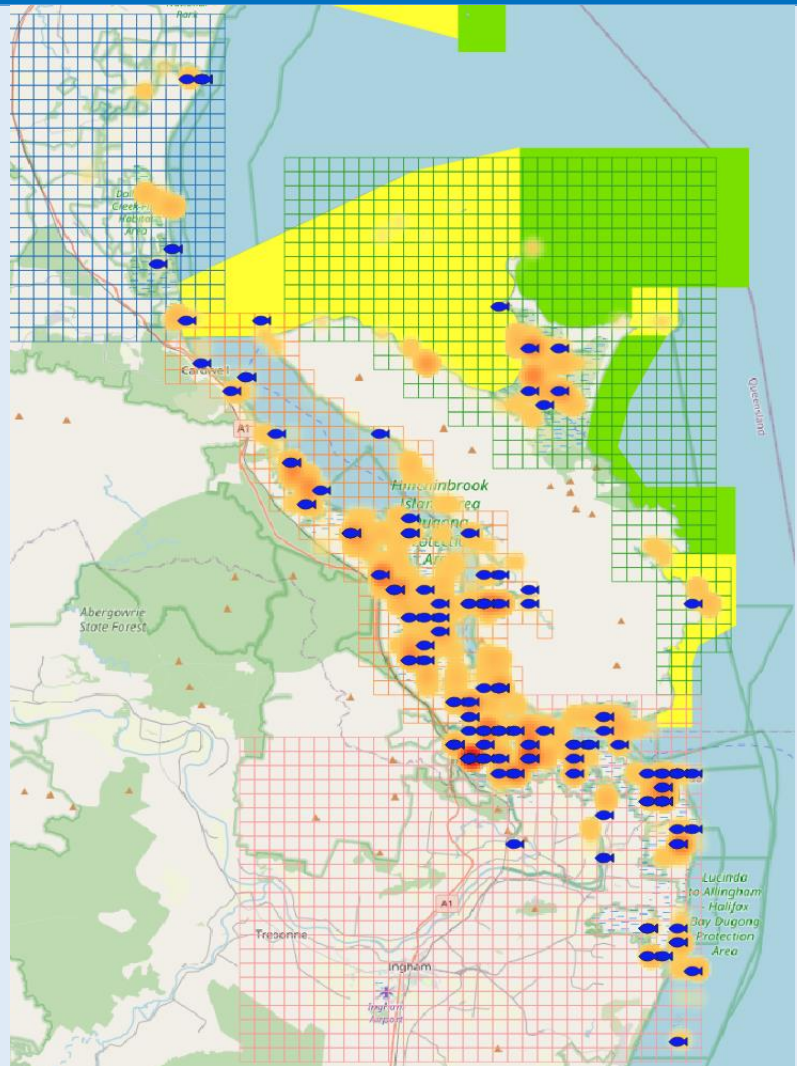
KEY SPECIES			
BARRAMUNDI	MANGROVE JACK		BARRED JAVELIN
			
GOLDSPOTTED ROCKCOD			BLACKSPOTTED ROCKCOD
			
TAG AND TAG RATE			
Catch and effort taggers number of tagged fish days fished 2016-2025	High	Low	Now
	Tagged		
	2019	2023	2025
	631	139	344
	Days fished		
	2019	2023	2025
	153	25	68
Fish tagged and recaptured 2016-2025	Tagged		4232
	Recaptured		190
	Recapture rate		4.5%
	Tagged 2025		344
			
Tag rate Fish/day 2016-2025	Tagged		4232
	Recaptured		190
	Recapture rate		4.5%
	Tagged 2025		344
			
Tag rate Fish/day 2016-2025	High	Low	Now
	Tag rate		
	2023	2017	2025
	5.6	3.0	5.1
	10 year average		4.0
			

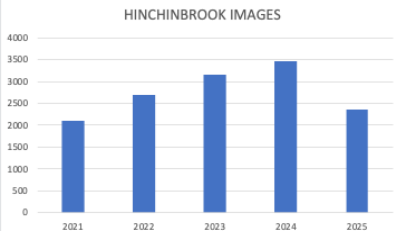
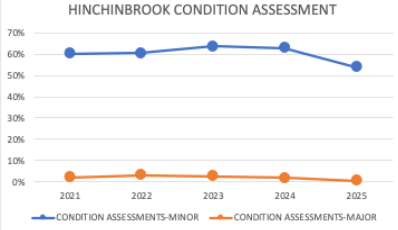
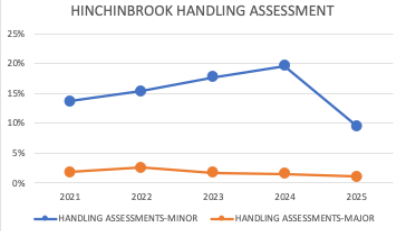
SPECIES			
Species composition Numbers tagged 2016-2025	Barramundi	834	
	Mangrove Jack	1025	
	Rockcods	1406	
	Barred Javelin	240	
Species composition Percentage tagged 2016-2025	Barramundi	20%	
	Mangrove Jack	24%	
	Rockcods	33%	
	Barred Javelin	6%	
	All	83%	
Legal fish recaptures by recreational fishers (ex- taggers) kept or released 2016-2025	Species	Kept	
	Barramundi	8 (80%)	
	Mangrove Jack	7 (56%)	
	Rockcod	12 (67%)	
	Key species	37 (73%)	

LOCATIONS

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

Tagged	4232
Recaptured	190



FISH CONDITION AND HANDLING				
Fish condition from photos Images 2021-2025	High	Low	Now	
	2024	2020	2025	
	3469.	986	2353	
	Total images 13761			
Fish condition assessment Fins/lesions and skin condition 2021-2025	High	Low	Now	
	Minor			
	2023	2021	2025	
	64%	60%	54%	
	Major			
	2023	2024	2025	
	3%	2%	1%	
Handling assessment Bleeding and scale loss 2018-2024	High	Low	Now	
	Minor			
	2024	2021	2025	
	20%	14%	10%	
	Major			
	2023	2020	2025	
	3%	1%	1%	

BARRAMUNDI



DATA RELIABILITY

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

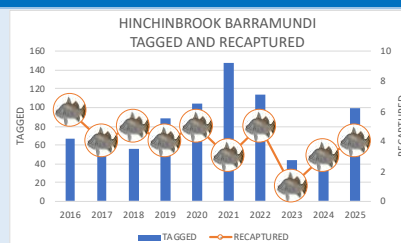
Reliability level	LOW		MODERATE		MODERATE		HIGH
Samples	10	41	68	271	384	664	
Confidence	80%	80%	90%	90%	95%	99%	
Error	20%	10%	10%	5%	5%	5%	



TAG AND TAG RATE

Fish tagged and recaptured from year tagged
2016-2025

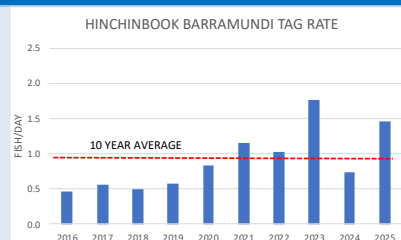
Tagged 834
Recaptured 40
Recapture rate 4.8%
Tagged 2025. 99



TAG RATE

Tag rate
Fish/day
2016-2025

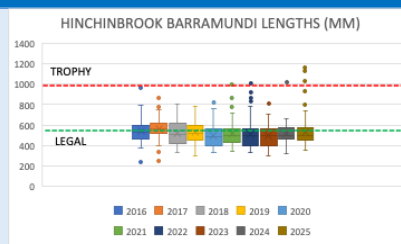
High Low Now
Tag rate
2023 2018 2025
1.8 0.5 1.5
10 year average 0.8



LENGTHS

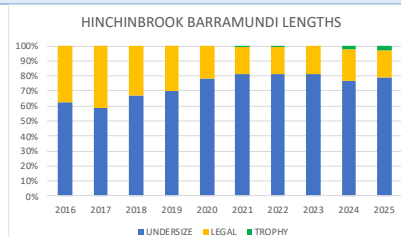
Average length (mm)
Bars show length range
Dots show outliers
2016-2025

High Low Now
Average length
2017 2020 2025
558 492 532
Max
2022 2019 2025
1005 780 1170



Fish lengths percentage
Undersize <580mm
Legal 580-1000mm
Trophy 1000+mm
2016-2025

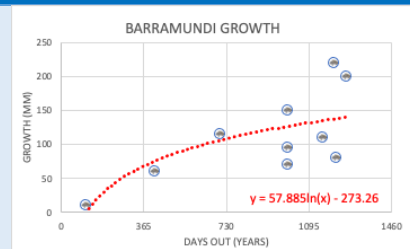
High Low Now
Legal-Trophy
2017 2022 2025
41% 18% 18%
Trophy
2024 16-20 2025
2% 0% 3%



GROWTH

Barramundi growth at the end of each year based on recaptures fish tagged <580mm 2016-2025

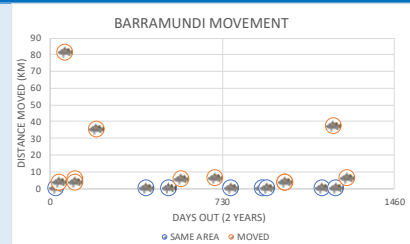
Recaptures	10
Growth (mm)	
Year 1	68
Year 2	108
Year 3	132
Year 4	149



MOVEMENT

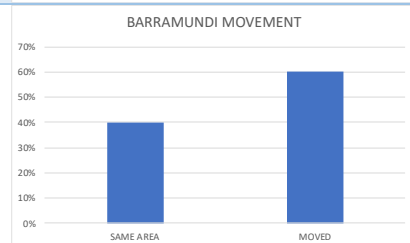
Barramundi movements Hinchinbrook area 2016-2025

Max distance 80km



Barramundi movements Hinchinbrook area 2016-2025

Recaptured	20
Same area	8 (40%)
Moved	12 (60%)

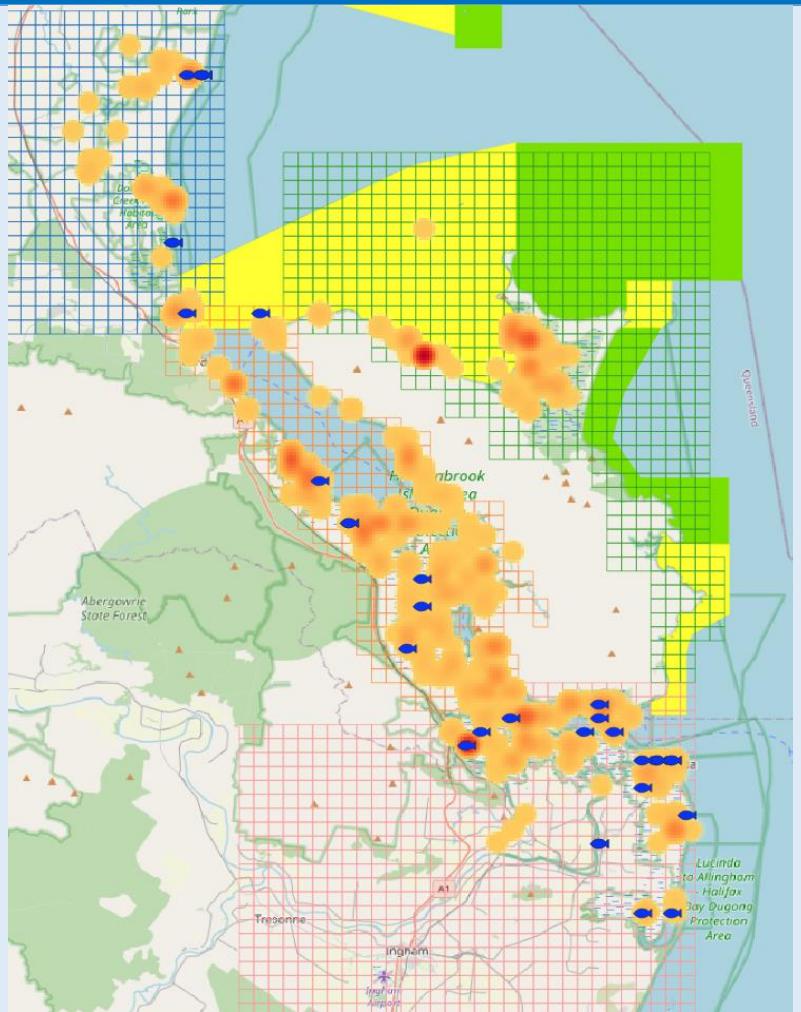


LOCATIONS

Barramundi tagged
(red-orange heat map)
Recaptures
(blue fish)
2016-2025

Tagged
Recaptured

835
40



MANGROVE JACK



DATA RELIABILITY

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

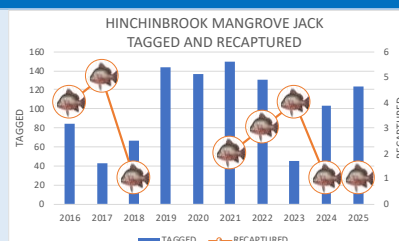
Reliability level	LOW			MODERATE			MODERATE			HIGH		
Samples	10		41		68		271		384		664	
Confidence		80%		80%		90%		90%		95%		99%
Error		20%		10%		10%		5%		5%		5%



TAG AND TAG RATE

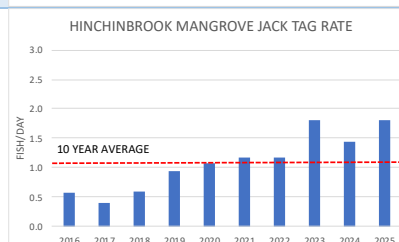
Fish tagged and recaptured from year tagged
2016-2025

Tagged	1025
Recaptures	21
Recapture rate.	2.0%
Tagged 2025	123



Tag rate
Fish/day
2016-2025

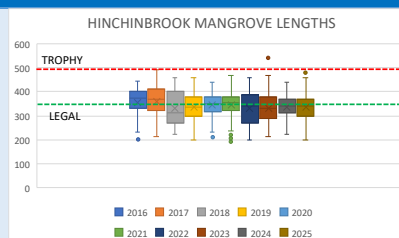
High	Low	Now
Tag rate		
2023	2017	2025
1.8	0.4	1.8
10 year average		0.8



LENGTHS

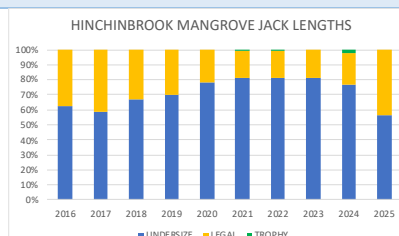
Average length (mm)
Bars show length range
Dots show outliers
2016-2025

High	Low	Now
Average length		
2017	2022	2025
358	331	337
Max		
2023	2020	2025
540	440	480



Fish lengths percentage
Undersize <350mm
Legal 350-500mm
Trophy 500+mm
2016-2025

High	Low	Now
Legal-trophy		
2017	2022	2025
41%	18%	44%
Trophy		
2024	2023	2025
2%	0%	0%



MOVEMENT		
Mangrove Jack movements Hinchinbrook area Distance moved (km) 2016-2025	Max distance moved 8km	
Mangrove Jack movements Hinchinbrook area Distance moved (km) 2016-2025	Recaptured 15 Same area 13 (87%) Moved 2 (13%)	

LOCATIONS		
Mangrove Jack Tagged (red-orange heat map) Recaptures (blue fish) 2016-2025		
Tagged 1025 Recaptured 21		

ROCKCODS



DATA RELIABILITY

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

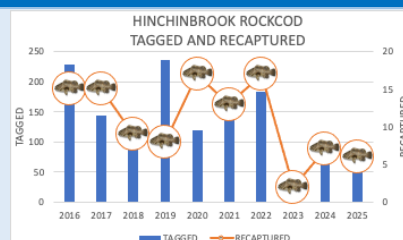
Reliability level	LOW	MODERATE	MODERATE	HIGH
Samples	10	41	68	271
Confidence	80%	80%	90%	95%
Error	20%	10%	5%	5%



TAG AND TAG RATE

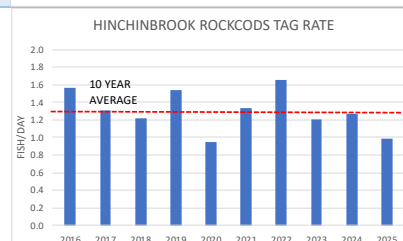
Fish tagged and recaptured from year tagged
2016-2025

Tagged	1406
Recaptured	109
Recapture rate	7.8%
Tagged 2025	109



Tag rate
Fish/fisher day
2016-2025

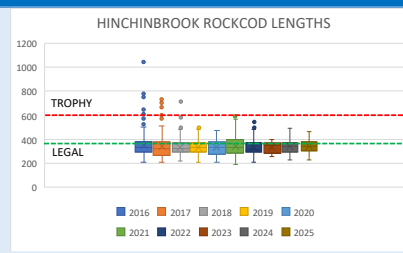
High	Low	Now
Tag rate		
2016	2020	2025
1.6	1.0	1.0
10 year average		1.3



LENGTHS

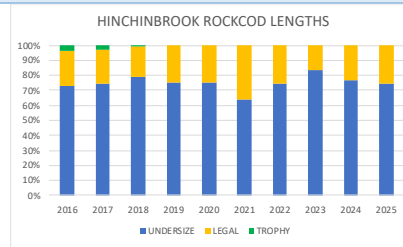
Average length (mm)
Both species
Bars show length range
Dots show outliers
2016-2025

High	Low	Now
Average length		
2016	2015	2025
342	328	337
Max		
2016	2020	2025
1050	470	460



Fish lengths percentage
Both species
Undersize <380mm
Legal 380-600mm
Trophy 600+mm
2016-2025

High	Low	Now
Legal-Trophy		
2021	2023	2025
36%	17%	26%
Trophy		
2016	19-24	2025
4%	0%	0%

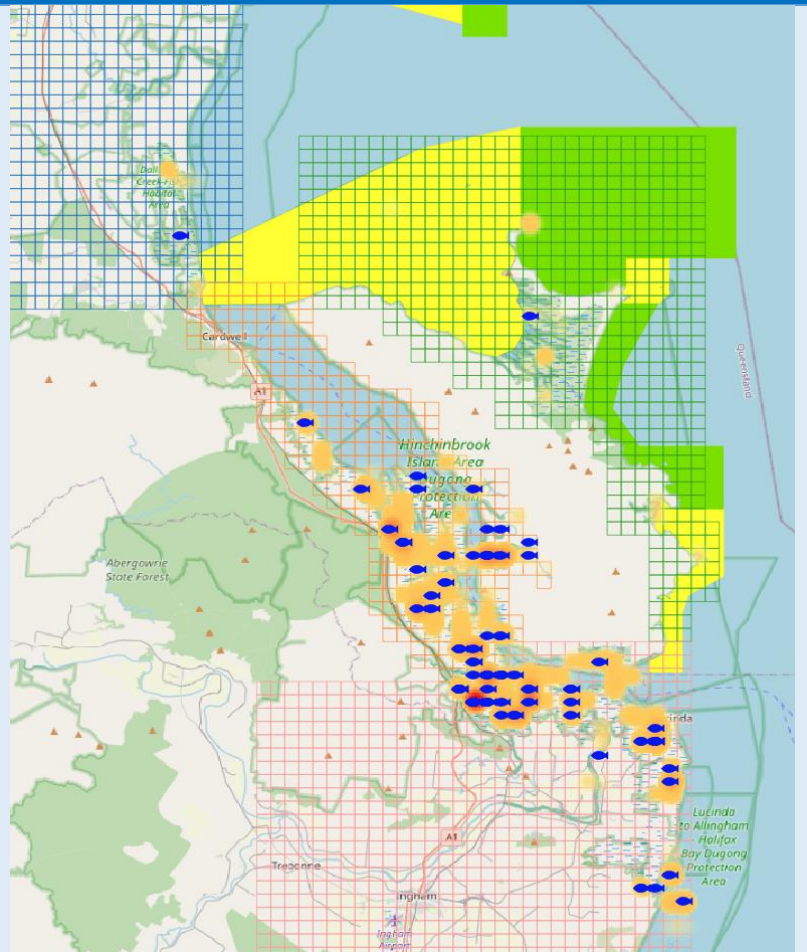


MOVEMENT		
Rockcod movements Hinchinbrook area Distance moved (km) 2016-2025	Max distance moved 80km	
Rockcod movements Hinchinbrook area 2016-2025	Recaptured 90 Same area 69 (77%) Moved 21 (23%)	
Blackspotted Rockcod movement offshore 2016-2025 Tagged Tag Y01911 Date 22/11/2019 Length 280mm Location Round Hill Creek Recaptured Date 7/4/2023 Length 430mm Location Eddy Reef Moved. 80km		

LOCATIONS

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

Tagged 1406
Recaptured 109



JAVELIN



DATA RELIABILITY

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

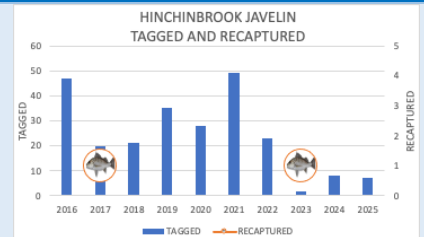
Reliability level	LOW	MODERATE	MODERATE	HIGH
Samples	10	41	68	271
Confidence	80%	80%	90%	95%
Error	20%	10%	5%	5%



TAG AND TAG RATE

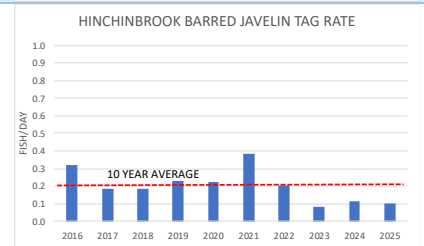
Fish tagged and recaptured
2016-2025

Tagged	233
Recaptured	2
Recapture rate	0.9%
Tagged 2025	7



Tag rate
Fish/fisher day
2016-2025

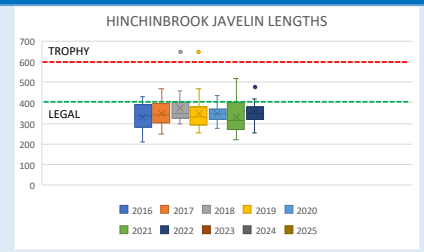
High	Low	Now
Tag rate		
2021	2023	2025
0.4	0.1	0.1
10 year average		0.2



LENGTHS

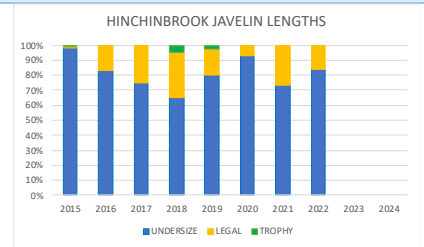
Average length (mm)
Bars show length range
2016-2025

High	Low	Now
Average length		
2018	2016	2025
375	331	NA
Max		
2019	2016	2025
650	430	NA



Fish lengths percentage
Undersize <400mm
Legal 400-599mm
Trophy 600+mm
2016-2025

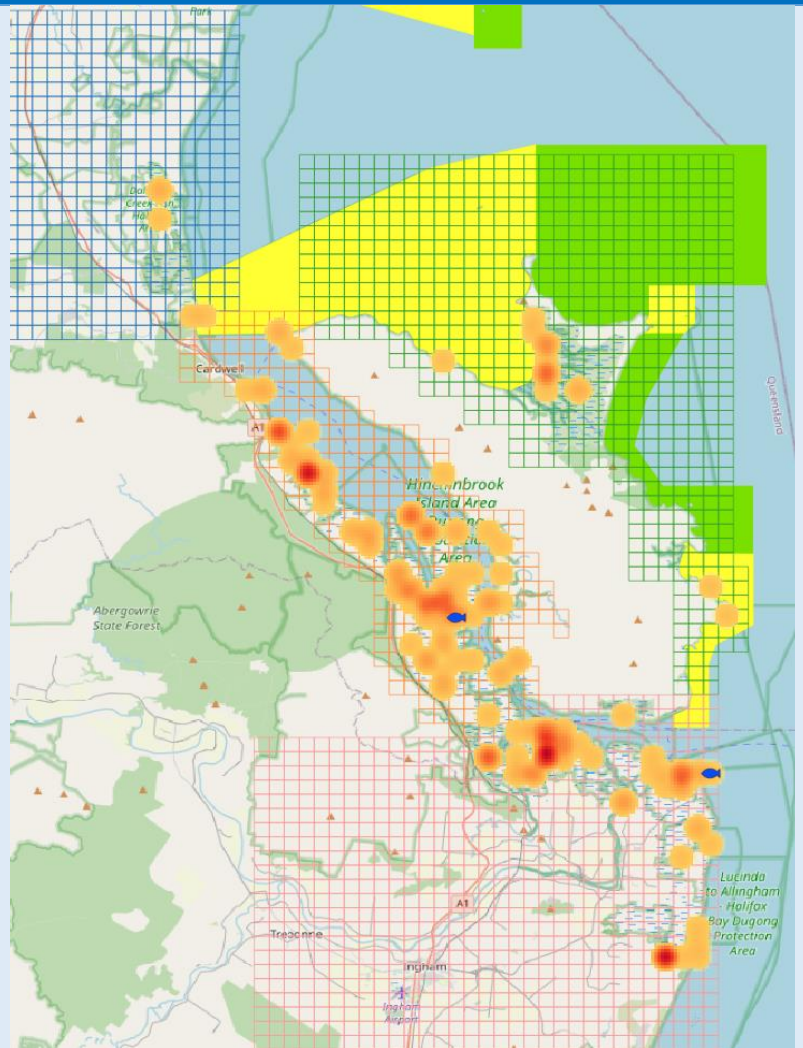
High	Low	Now
Legal-Trophy		
2018	2020	2025
30%	7%	NA
Trophy		
2018	20-24	2025
5%	0%	NA


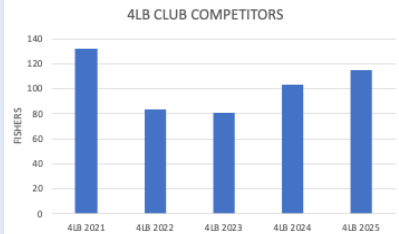

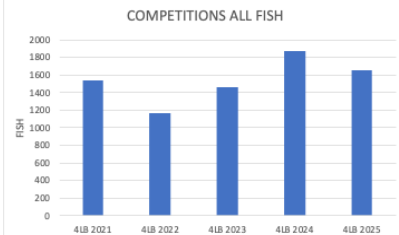
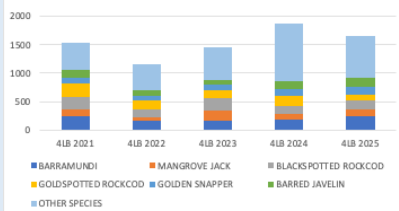
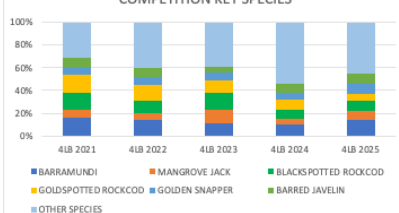


LOCATIONS

Barred Javelin
Tagged
(red-orange heat map)
Recaptured
(blue dots)
2016-2025

Tagged 233
Recaptured 2



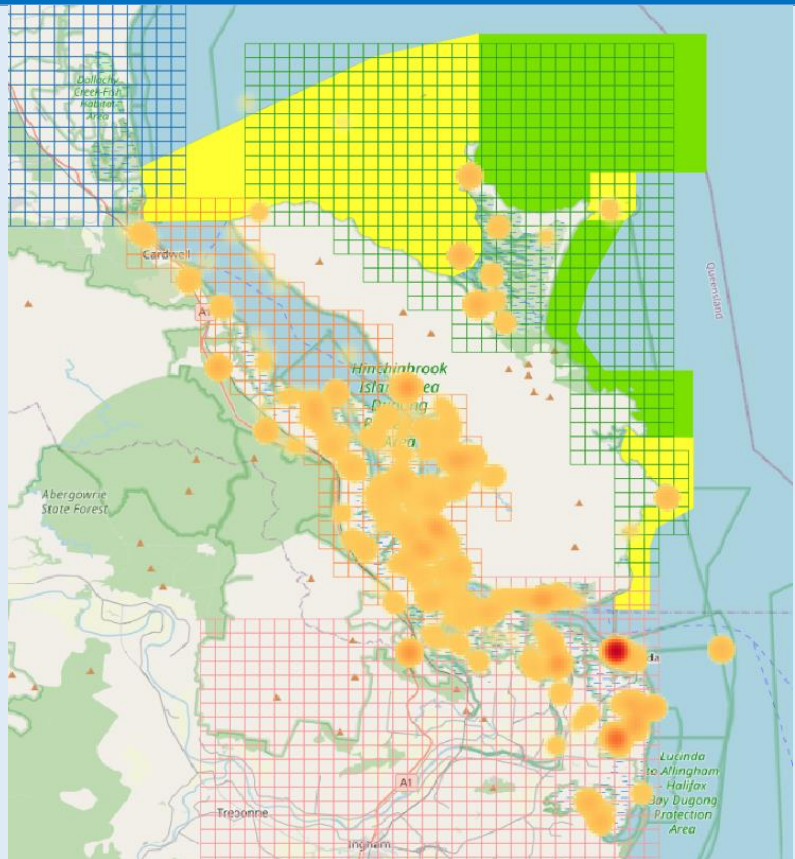
4LB CLUB COMPETITIONS				
Event				
4lb club 2021				
4lb club 2022				
4lb club 2023				
4lb club 2024				
4lb club 2025				
COMPETITIONS				
Competitors		Fishers		
	4LB 2021	132		
	4LB 2022	83		
	4LB 2023	81		
	4LB 2024	103		
	4LB 2025	115		
Timeline of events	Dates			
4lb club 2021	15-16/10/2021 (2 days)			
4lb club 2022	21-22/10/2022 (2 days)			
4lb club 2023	11-12/8/2023 (2 days)			
4lb club 2024	16-17/8/2024 (2 days)			
4lb club 2025	5-6/9/2025 (2 days)			
CATCH				
Catch (all fish)		Total catch		
	4LB 2021	1544		
	4LB 2022	1160		
	4LB 2023	1456		
	4LB 2024	1868		
	4LB 2025	1661		
Key species caught		Barra	M Jack	
Barramundi	4LB 2021	249	105	
Mangrove Jack	4LB 2022	167	63	
Blackspotted Rockcod	4LB 2023	162	174	
Goldspotted Rockcod	4LB 2024	188	101	
Golden Snapper	4LB 2025	237	129	
Barred Javelin				
Key species caught		Key	Other	
Barramundi	4LB 2021	69%	31%	
Mangrove Jack	4LB 2022	60%	40%	
Blackspotted Rockcod	4LB 2023	61%	39%	
Goldspotted Rockcod	4LB 2024	46%	54%	
Golden Snapper	4LB 2025	55%	45%	
Barred Javelin				

CATCH RATE				
Catch rate All fish Fish/day		All fish		
	4LB 2021	5.8		
	4LB 2022	7.0		
	4LB 2023	9.0		
	4LB 2024	9.1		
	4LB 2025	7.2		
Catch rate Key species combined Fish/day		Key species		
	4LB 2021	4.0		
	4LB 2022	4.2		
	4LB 2023	5.5		
	4LB 2024	4.1		
	4LB 2025	4.0		
LENGTHS				
Barramundi lengths		Av length (mm)		
	4LB 2021	520		
	4LB 2022	503		
	4LB 2023	484		
	4LB 2024	503		
	4LB 2025	494		
Mangrove Jack lengths		Av length (mm)		
	4LB 2021	354		
	4LB 2022	348		
	4LB 2023	332		
	4LB 2024	343		
	4LB 2025	342		
Rockcod Blackspotted Rockcod Goldspotted Rockcod lengths		Av length (mm)		
	4LB 2021	326		
	4LB 2022	326		
	4LB 2023	336		
	4LB 2024	337		
	4LB 2025	332		
Pikey Bream lengths		Av length (mm)		
	4LB 2021	NA		
	4LB 2022	362		
	4LB 2023	344		
	4LB 2024	366		
	4LB 2025	333		
Barred Javelin lengths		Av length (mm)		
	4LB 2021	360		
	4LB 2022	378		
	4LB 2023	355		
	4LB 2024	359		
	4LB 2025	355		

LOCATIONS

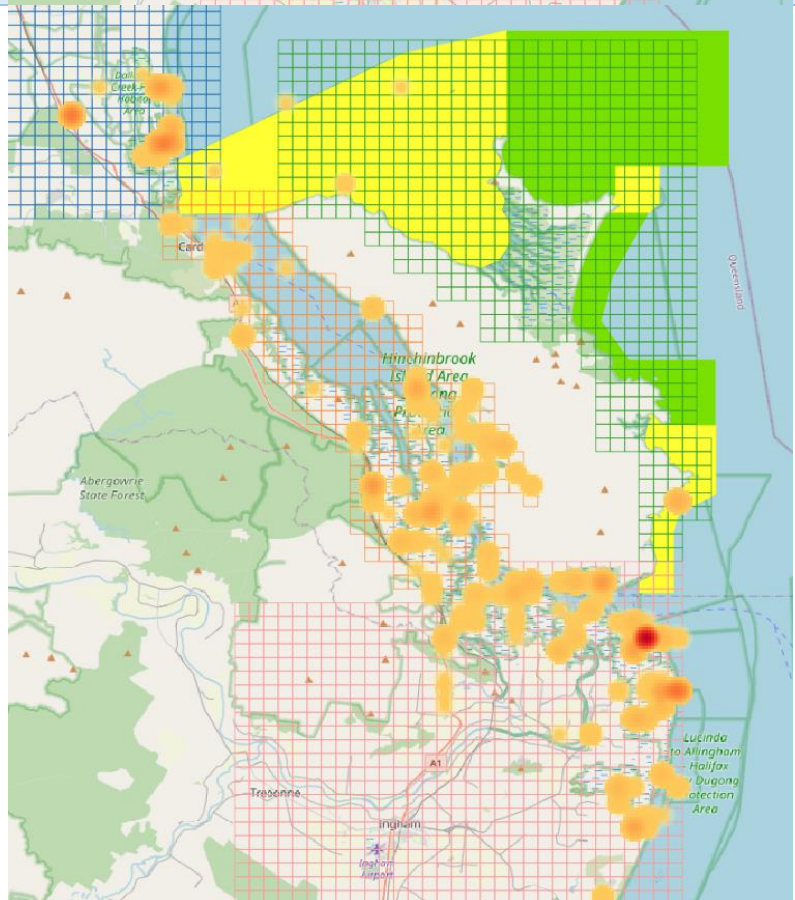
Locations
(red-orange heat map)
Combined
4lb club 2021

All fish 1544



Locations
(red-orange heat map)
Combined
4lb club 2022

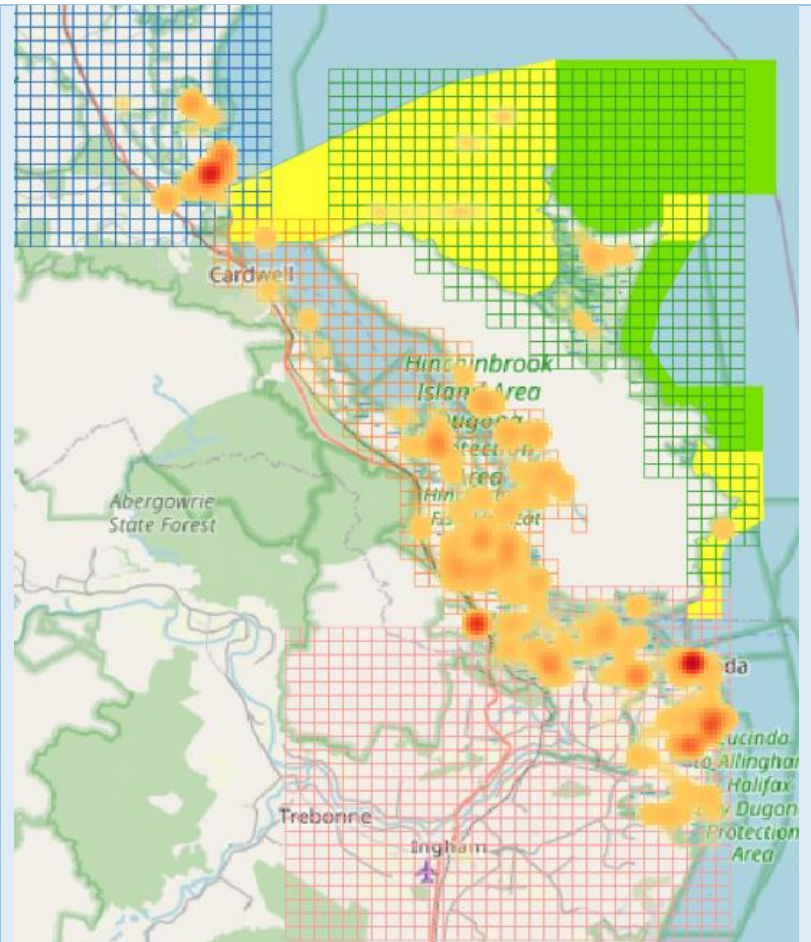
All fish 1160

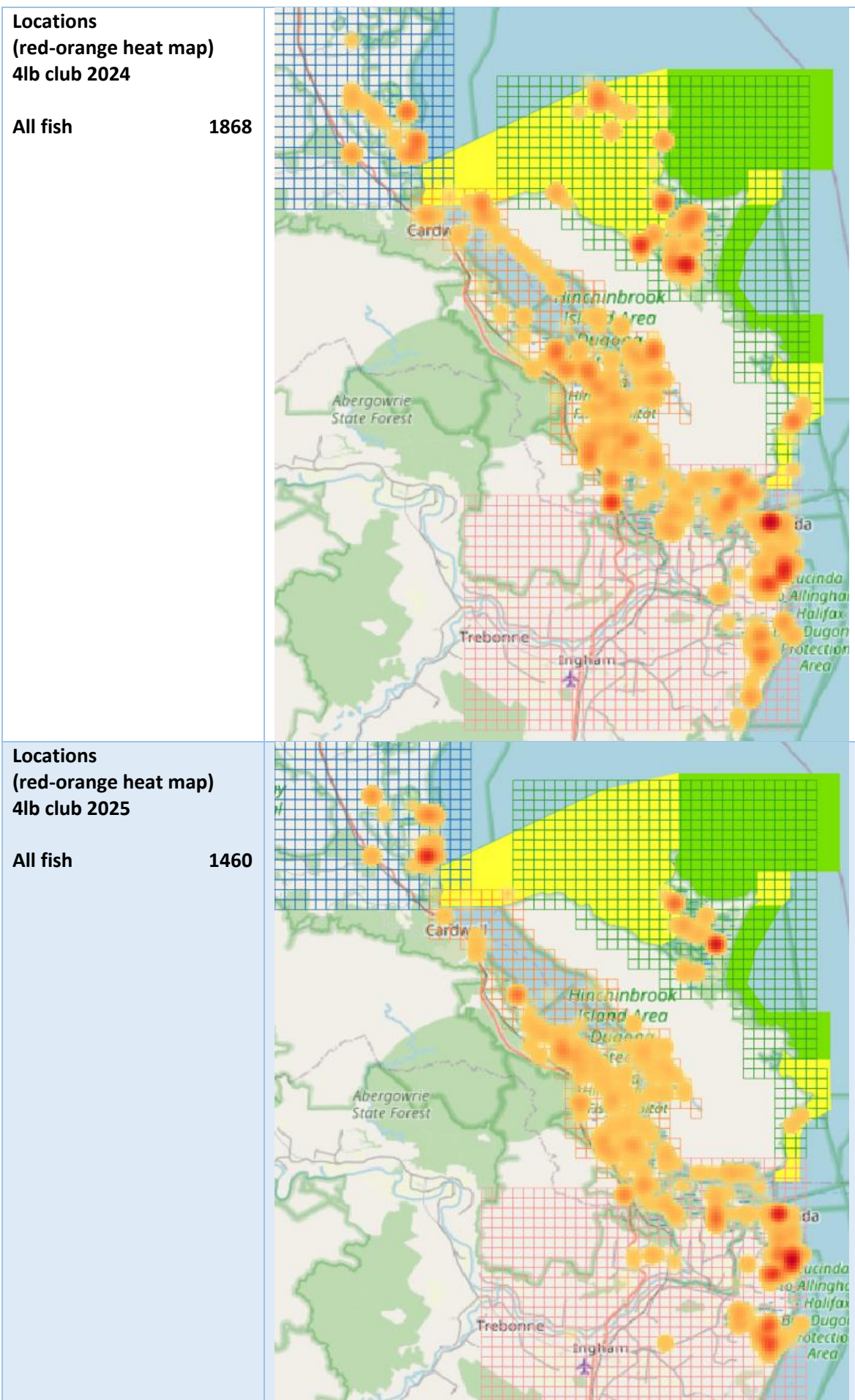


Locations
(red-orange heat map)
4lb club 2023

All fish

1456





Data sources

Data used in the Hinchinbrook Crystal Bowl are:

- Tag records and recapture records at <http://crystalbowl.infofishaustralia.com.au/>.
- Cardwell rainfall records from station 032004 and Upper Murray station 032109 at <http://www.bom.gov.au/climate/data/>.
- 4lb club competition records from Infofish Australia Trackmyfish app.

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 fisher days (at least 1 per month) to provide a reliable catch rate.
- For Barramundi undersized fish are <580mm, legal fish are ≥580 and <1000mm and trophy fish are ≥1000mm.
- For Mangrove Jack undersized fish are <350mm, legal fish are ≥350 and <500mm and trophy fish are ≥500mm.
- For Rockcod undersized fish are <380mm, legal fish are ≥380 and <600mm and trophy fish are ≥600mm.
- For Barred Javelin undersized fish are <400mm, legal fish are ≥400 and <600mm and trophy fish are ≥600mm.
- Analysis of Goldspotted Rockcod and Blackspotted Rockcod is based on combined records as the species are closely related, occupy similar habitat, and have the same level of catchability.
- 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 HCC, HIC, IGH, and KR01 and other grid maps where fish were recaptured outside the area.
- Movement has been calculated as the shortest distance by water from the tag to the recapture location derived from Google Earth.
- Distance from fisher's address to recapture location is the straight-line distance between locations based on Google Earth coordinates with Local <80, Intrastate ≥80 and Qld postcode, Interstate postcode other than Qld.

The following tables were used to assess fins and skin.

Fins		
Variable Condition	Designation	Score
No Active Erosion	0	0
Light Active Erosion	1	10
Moderate Active Erosion with some haemorrhage	2	20
Severe Active Erosion with some haemorrhage	3	30

Skin		
Variable Condition	Designation	Score
Normal no aberrations	0	0
Mild skin aberrations	1	10
Moderate skin aberrations	2	20
Severe skin aberrations	3	30

- The following tables were used to assess fish handling.

Scale loss		
Variable Condition	Designation	Score
No scale loss	0	0
Mild scale loss (individual visible)	1	10
Moderate scale loss (single patch of scales)	2	20
Severe scale loss (multiple patches/complete)	3	30

Bleeding		
Variable Condition	Designation	Score
No bleeding	0	0
Mild bleeding (single wound/single patch of blood)	1	10
Moderate bleeding (more than one wound/blood visible in fish mat/surrounds)	2	20
Severe bleeding (multiple wounds/blood visible in large amounts on fish and mat/surrounds)	3	30