



## RODDS HARBOUR REVIEW 2025

### INFORMATION RATING



Key species: Dusky Flathead, Mangrove Jack, Barred Javelin

Fish timeframe: 2016-2025

Fisher timeframe: 2021-2025

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Department of Primary Industries

## RODDS HARBOUR OVERVIEW

### Summary of 2025

- Rodds harbour is mostly fished by locals and is primarily a harvest fishery.
- Tagging this year has remained at a lower level than prior to the very wet year in 2022.
- Live scope sounders have changed fisher behaviour with increased targeting of Barred Javelin.

There are no rivers that flow into Rodds Harbour. It includes Wild Cattle Creek (part), Colosseum Inlet, Boyne Creek, 7 Mile Creek and Worthington Creek. It also includes Hummock Hill Island and Rodds Peninsula. Turkey Beach is a small town in the area with sparse population elsewhere.

Rodds Harbour is mostly fished by locals from around Rodds Harbour and from the Gladstone area with a smaller group coming from other centres in Central Qld. It also attracts a small number of fishers from further afield in Qld but very limited from interstate.

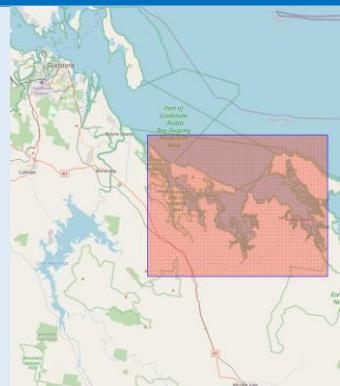
Key target species for taggers are Dusky Flathead, Mangrove Jack and Barred Javelin accounting for 75% of fish tagged and these would be the main species caught by recreational fishers along with Bream. Tagging effort has shifted from Flathead to Javelin in the last few years. This was mainly due to a change in the taggers fishing the area having different species preferences, Javelin are more visible using the latest live scope sounder technology and are responsive to soft plastic lures. There has been an increase in tagging of legal length Javelin.

A very wet year in 2022 resulted in a fall in both tagging effort and recaptures and that reduction in the effort continued through 2023 and 2024, with a slight increase in 2025.

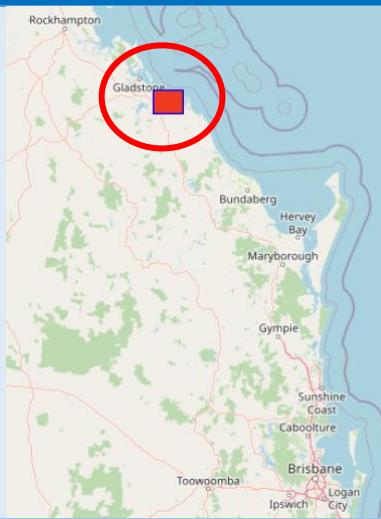
The retention of tagged fish by recreational fishers (other than taggers) suggests there is a high level of harvest of legal fish, particularly for Javelin and Flathead.

Few tagged fish have been recaptured outside the harbour area except for Mangrove Jack where 3 fish have been recaptured offshore. Mangrove Jack move to offshore reef habitats when they mature.

## RODDS HARBOUR LOCATION



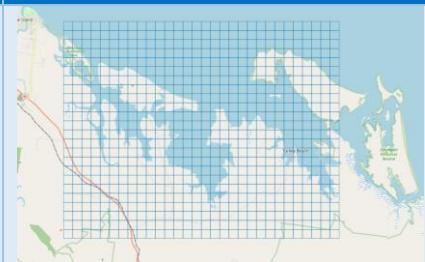
Turkey Beach  
24.1°S  
151.65°E



## WATERWAYS

### Map Rodds Harbour RBT

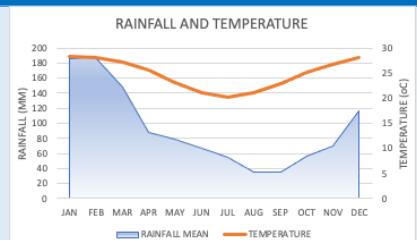
Wild Cattle Creek  
Colosseum Inlet  
Boyne Creek  
7 Mile Creek  
Turkey Beach  
Worthington Creek



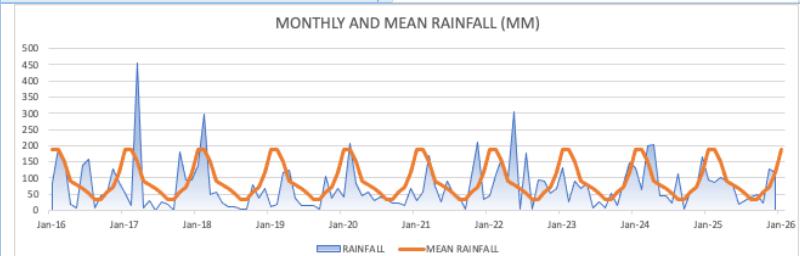
## ENVIRONMENTAL CONDITIONS

**Rodds Harbour**  
**Mean monthly rainfall (mm)**  
**Mean monthly max temperature (°C)**

Rainfall	Month	mm
Highest	Feb	188
	Jan	185
Temp	Month	°C
	Dec-Feb	28



**Monthly rainfall**  
**Mean monthly rainfall (mm)**  
**2016-2025**



## 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%	90%
Error	20%	10%	5%	5%



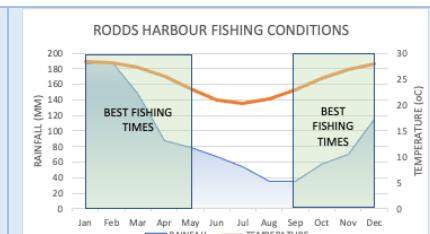
**Fishing conditions**

**Average rainfall (mm)**

**Mean maximum day temperature (°C)**

**Best fishing key species**

**Jan-May  
Sep-Dec**



**Monthly effort**

**Mean monthly rainfall**

**Days fished combined**

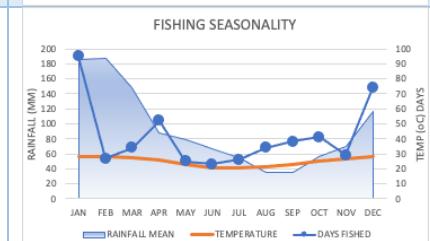
**Taggers**

**Recapture fishers**

**2021-2025**

**Most days fished**  
Combined

**Jan  
Dec  
Apr**



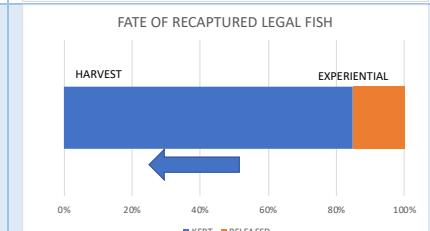
**Harvest or experiential fishery**

**Release rate of recaptured legal fish of key species (ex-taggers)**

**2016-2025**

**Key species legal fish kept rate**

**Legal fish** 52  
**Kept** 44 (85%)  
**Released** 8 (15%)



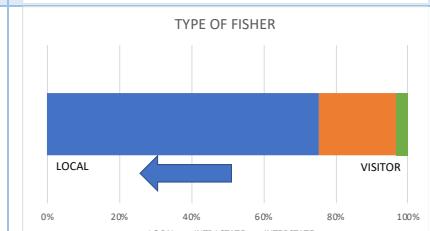
**Local or visitor fishery**

**Where recapture fishers live**

**2021-2025**

**Recapture fishers** 65

**Local** 49 (75%)  
**Visitors** 14 (25%)

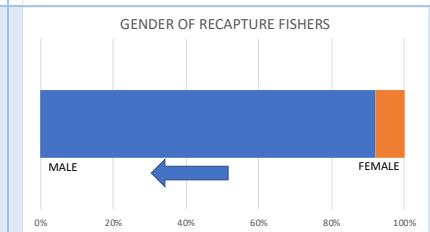


**Gender of recapture fishers (ex-taggers)**

**2021-2025**

**Recapture fishers** 37

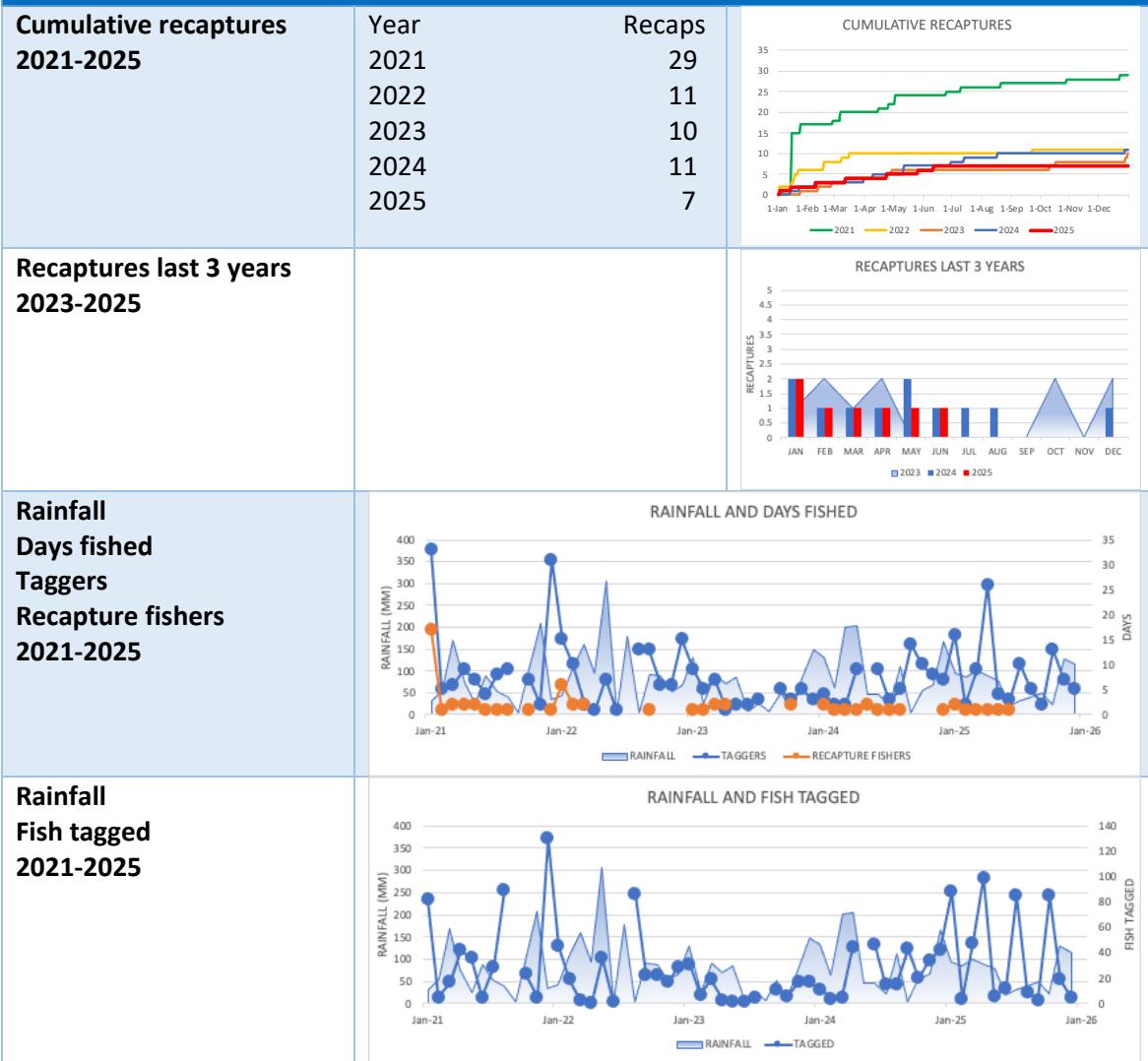
**Female** 3 (8%)  
**Male** 34 (92%)



## FISHER ACTIVITY

<b>Monthly activity</b> <b>Days fished combined</b> <b>Taggers (441)</b> <b>Recapture fishers (57)</b> <b>2021-2025</b>	Month Most days Jan Dec	% 19% 14%	<p>RODDS HARBOUR DAYS FISHED BY MONTH</p> <table border="1"> <thead> <tr> <th>Month</th> <th>Taggers (%)</th> <th>Recapture Fishers (%)</th> <th>Combined (%)</th> </tr> </thead> <tbody> <tr><td>JAN</td><td>35</td><td>18</td><td>20</td></tr> <tr><td>FEB</td><td>10</td><td>10</td><td>10</td></tr> <tr><td>MAR</td><td>10</td><td>12</td><td>12</td></tr> <tr><td>APR</td><td>10</td><td>10</td><td>10</td></tr> <tr><td>MAY</td><td>10</td><td>10</td><td>10</td></tr> <tr><td>JUN</td><td>10</td><td>10</td><td>10</td></tr> <tr><td>JUL</td><td>10</td><td>10</td><td>10</td></tr> <tr><td>AUG</td><td>10</td><td>10</td><td>10</td></tr> <tr><td>SEP</td><td>10</td><td>10</td><td>10</td></tr> <tr><td>OCT</td><td>10</td><td>10</td><td>10</td></tr> <tr><td>NOV</td><td>10</td><td>10</td><td>10</td></tr> <tr><td>DEC</td><td>10</td><td>10</td><td>10</td></tr> </tbody> </table>	Month	Taggers (%)	Recapture Fishers (%)	Combined (%)	JAN	35	18	20	FEB	10	10	10	MAR	10	12	12	APR	10	10	10	MAY	10	10	10	JUN	10	10	10	JUL	10	10	10	AUG	10	10	10	SEP	10	10	10	OCT	10	10	10	NOV	10	10	10	DEC	10	10	10
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<b>Location activity</b> <b>Taggers (red-orange heat map)</b> <b>Recapture fishers (blue fish)</b> <b>2021-2025</b>	Tagged Recaptured	1658 68																																																					

## FISHER EFFORT



## FISHER TRAVEL

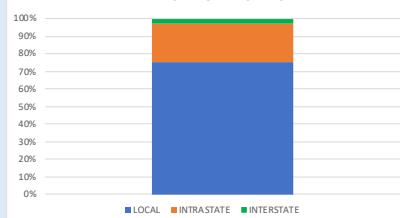
<b>Cumulative distance (km) home to recapture location 2021-2025</b>		
<b>Total distance (km) home to recapture location 2021-2025</b>	Year 2021 2022 2023 2024 2025	
<b>Distance (km) home to recapture location</b> <b>Bars show distance range</b> <b>Dots show outliers</b> <b>2021-2025</b>		
<b>Distance (km) home to recapture location</b> <b>Bars show distance range</b> <b>Dots show outliers</b> <b>2021-2025</b>	Range (km) Local Intrastate Interstate	
<b>Average distance (km) From home to recapture location 2021-2025</b>	Av distance (km) Local Intrastate Interstate	

## WHERE RECAPTURE FISHERS LIVE

Where fishers recapturing  
fish live  
2021-2025

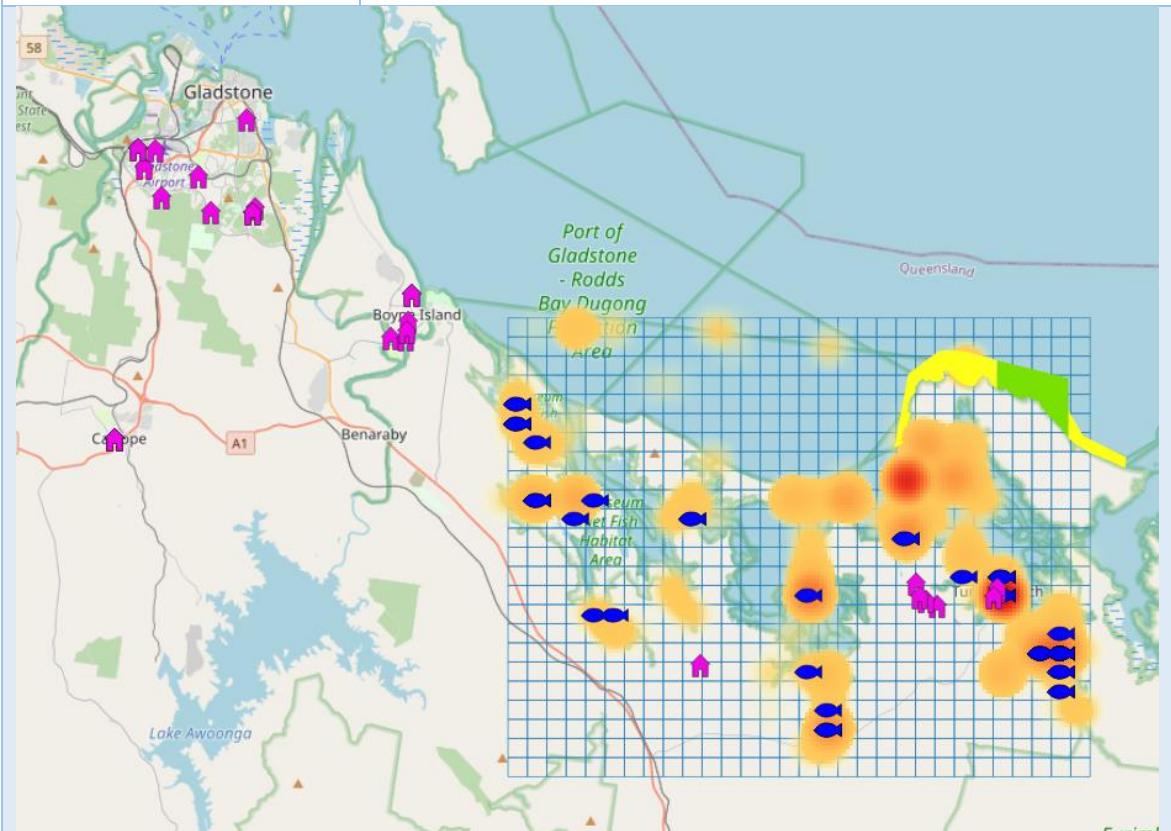
Recapture fishers	
Local	49 (75%)
Intrastate	14 (22%)
Interstate	2 (3%)

WHERE RECAPTURE FISHERS LIVE



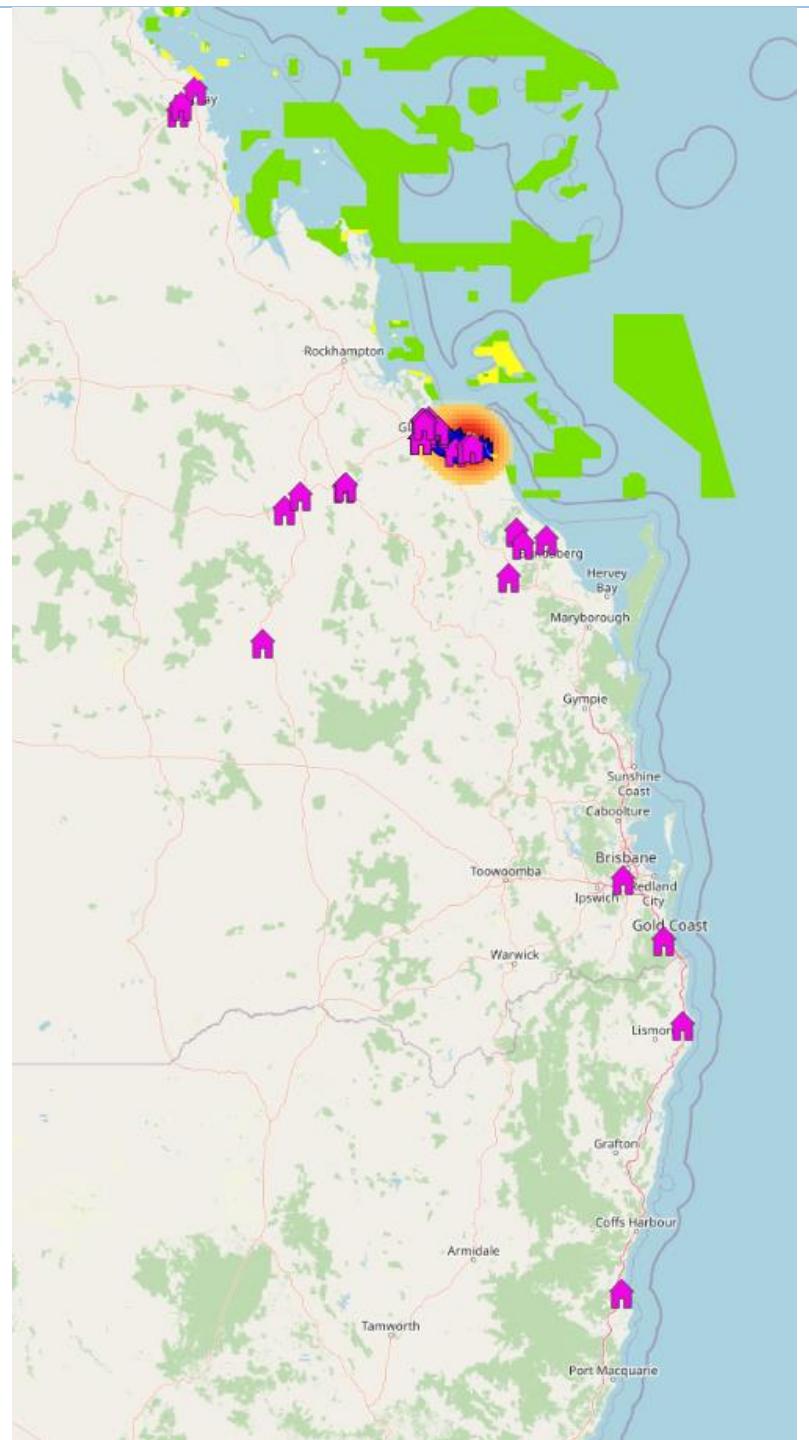
Where fishers recapturing  
fish live (pink houses)

Local  
2021-2025

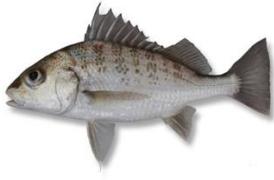


**Where fishers recapturing  
live (pink houses)**

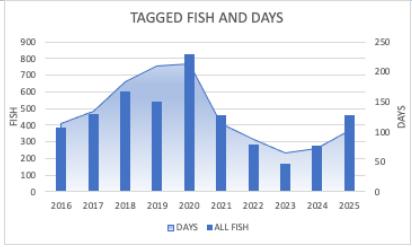
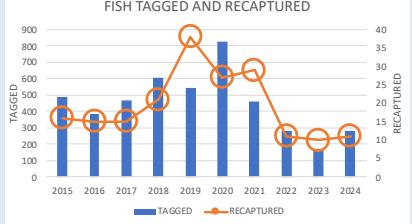
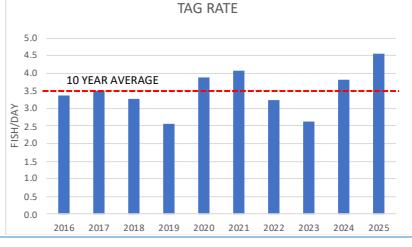
**Local  
Intrastate  
Interstate  
2021-2025**



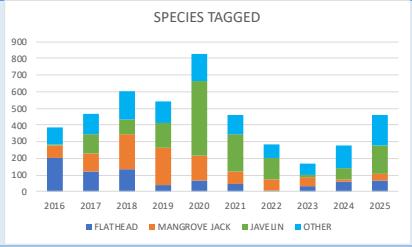
## KEY SPECIES

DUSKY FLATHEAD	MANGROVE JACK	BARRED JAVELIN
		

## TAGGED AND TAG RATE

<b>Taggers catch and effort</b> <b>Tagged fish (4486)</b> <b>Tag days (1296)</b> <b>2016-2025</b>	High	Low	Now	
	Tagged fish			
	2020	2023	2025	
	829	168	463	
	Days			
	2020	2023	2025	
<b>Fish tagged</b> <b>Recaptured</b> <b>2016-2025</b>			4486	
	Tagged		184	
	Recaptured		4.1%	
	Recapture rate		463	
<b>Tag rate</b> <b>All tagged fish</b> <b>Fish/day</b> <b>2016-2025</b>	Tagged 2025			
	High	Low	Now	
	Tag rate			
	2021	2023	2025	
	4.1	2.6	4.5	
	10 year average		3.5	

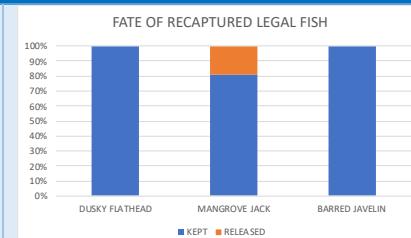
## SPECIES

<b>Species composition</b> <b>Numbers tagged</b> <b>2016-2025</b>	Dusky Flathead Mangrove Jack Barred Javelin Other	Tagged	
		770	
		1042	
		1392	
<b>Species composition</b> <b>Percentage tagged</b> <b>2016-2025</b>	Dusky Flathead Mangrove Jack Barred Javelin Combined	%	
		17%	
		23%	
		31%	
		71%	

## FATE

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

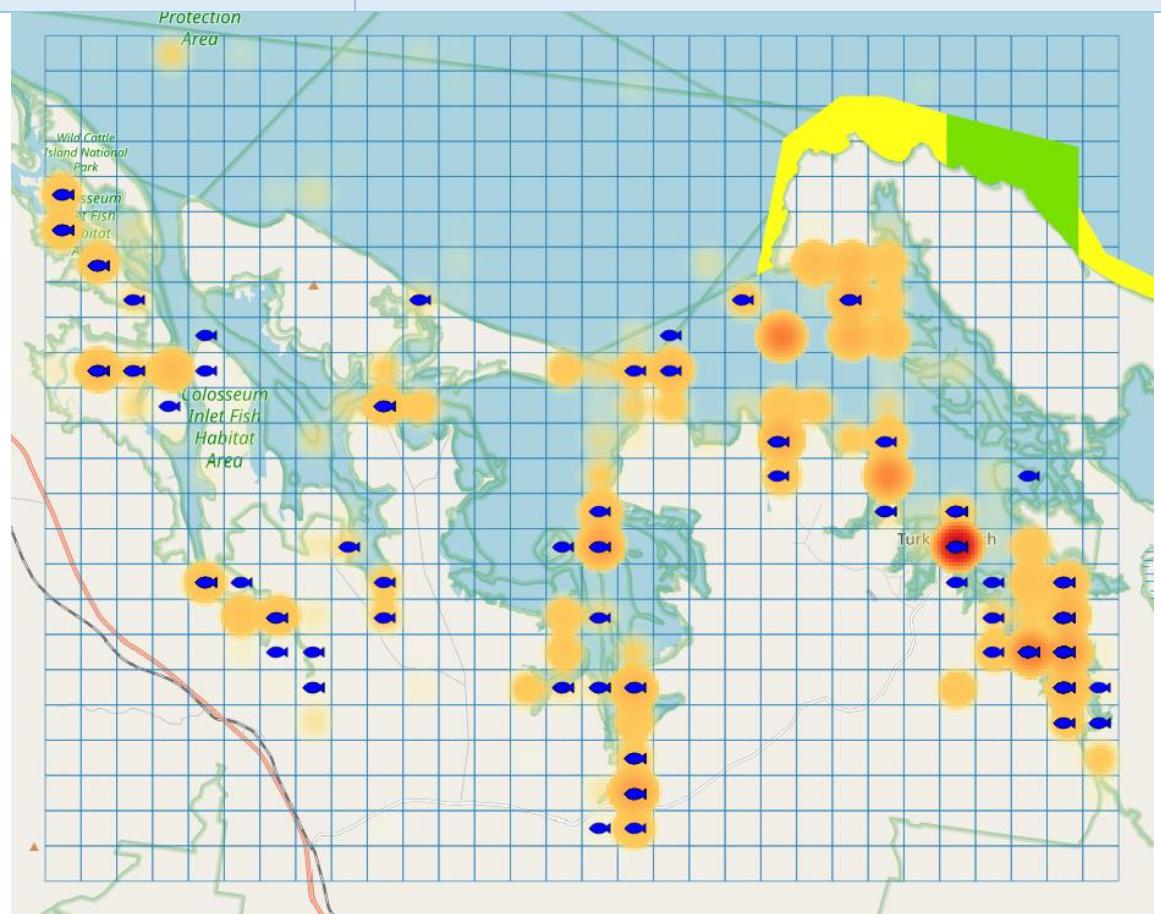
	Legal	Kept
Flathead	4	4 (100%)
Mangrove Jack	42	34 (81%)
Javelin	6	6 (100%)



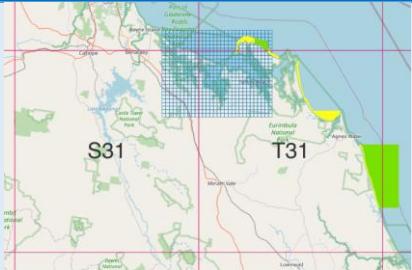
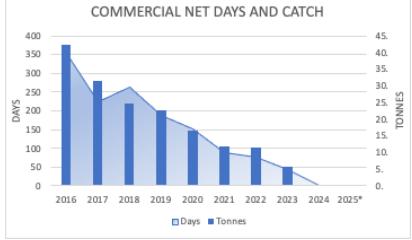
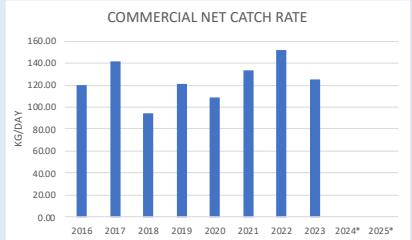
## LOCATIONS

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

Tagged	Recaptured
4486	184



## COMMERCIAL CATCH

QFish Commercial grids	Commercial grids	S31 T31	
<b>Commercial catch</b> <b>All species</b> <b>Qfish grids S31, T31</b> <b>Days fished</b> <b>Catch tonnes</b> <b>2016-2025</b> <b>2025* incomplete</b>	High Catch (t) 2016 2023 2025 119.9 5.6 NA Days 2016 2023 2025 353 45 NA	Low Now 2025 NA	
<b>Commercial catch</b> <b>Qfish grids S31, T31</b> <b>Catch rate (kg/day)</b> <b>2016-2025</b> <b>2025* incomplete</b>	High Catch rate (kg/day) 2022 2018 2025 152.4 94.5 NA	Low Now 2025 NA	

## DUSKY 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%	90%
Error	20%	10%	10%	5%



### TAGGED AND TAG RATE

Taggers catch and effort

Tagged fish (770)

Tag days (1296)

2016-2025

High Low Now

Tagged fish

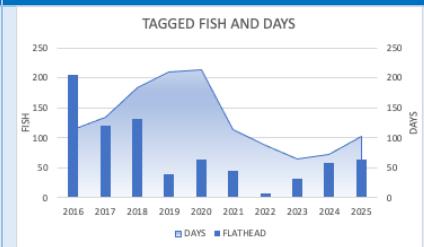
2016 2022 2025

205 8 64

Days

2020 2023 2025

213 64 102



Flathead

Tagged

Recaptured

2016-2025

Tagged

Recaptured

Recapture rate

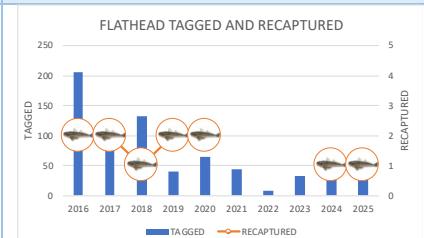
Tagged 2025

770

11

1.4%

64



Tag rate

Flathead

Fish/day

2016-2025

High Low Now

Tag rate

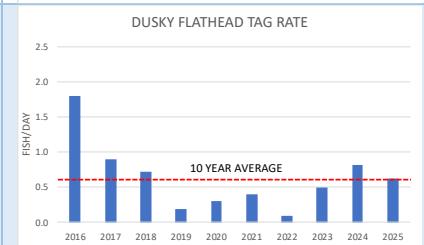
2016 2022 2025

1.8 0.1 0.6

10 year average

Now

0.6



### LENGTHS

Average length (mm)

Bars show length range

Dots show outliers

2016-2025

High Low Now

Average length

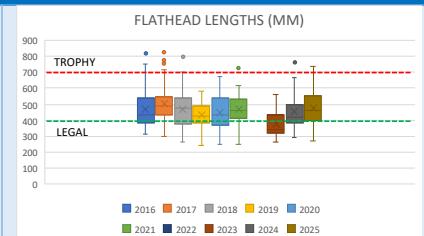
2017 2023 2025

501 373 478

Largest

2017 2023 2025

825 560 740



Fish lengths percentage

Undersize <400mm

Legal 400-700mm

Trophy 700+mm

2016-2025

High Low Now

Legal-trophy

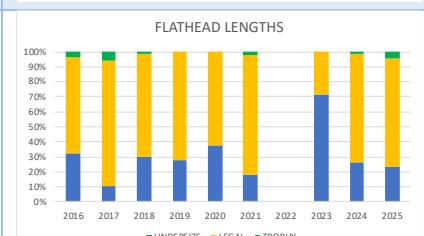
2017 2023 2025

83% 29% 72%

Trophy

2017 2023 2025

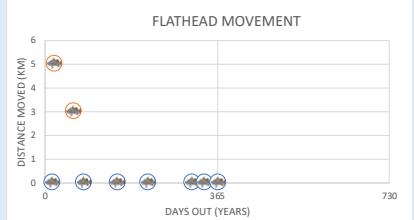
6% 0% 5%



## MOVEMENT

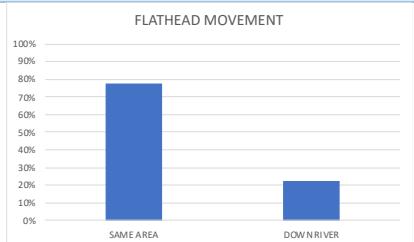
**Flathead movement**  
**Distance moved (km)**  
**2016-2025**

Recaptures 9  
 Same area 7 (78%)  
 Max movement (km) 5



**Flathead movement**  
**Distance moved (km)**  
**2016-2025**

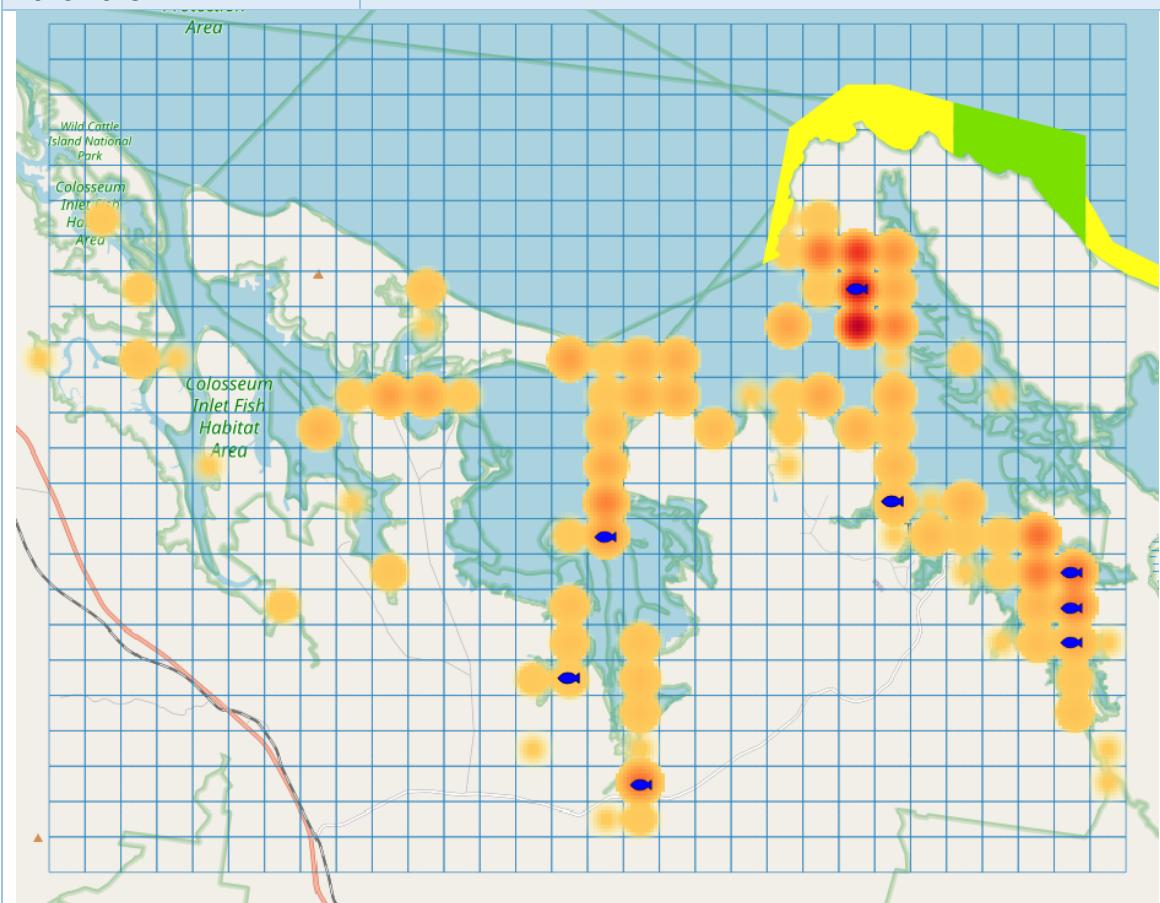
Recaptures 9  
 Same area 7 (78%)  
 Moved 2 (22%)



## LOCATIONS

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

Tagged 770  
 Recaptured 11



## MANGROVE JACK



### 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	384
Confidence	80%	80%	90%	95%
Error	20%	10%	10%	5%



### TAGGED AND TAG RATE

**Taggers catch and effort**

High      Low      Now

Tagged fish

**Tag days (1296)**

**2016-2025**

2018      2024      2025

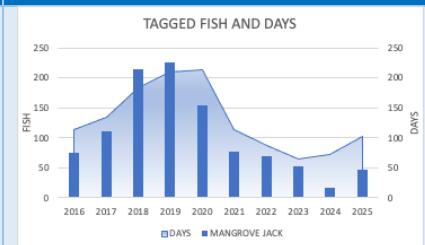
226      17      46

Days

**2016-2025**

2020      2023      2025

213      64      102



**Mangrove Jack**

Tagged      1042

**Tagged**

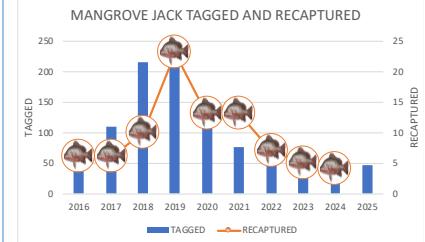
Recaptured      87

**Recaptured**

Recapture rate      8.3%

**2016-2025**

Tagged 2025      46



**Tag rate**

High      Low      Now

**Mangrove Jack**

Tag rate

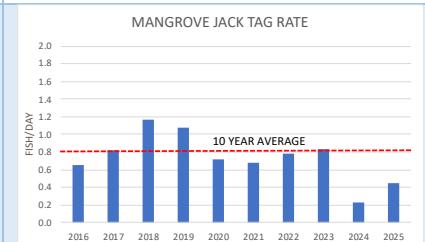
**Fish/day**

2018      2024      2025

**2016-2025**

1.8      0.2      0.5

10 year average      0.8



## LENGTHS

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

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

**MANGROVE JACK LENGTHS**

**MANGROVE JACK LENGTHS**

## GROWTH

<b>Mangrove Jack growth at the end of each year based on recaptures 2016-2025</b>	Recaptures	51
	Growth	mm
	Year 1	60
	Year 2	88
	Year 3	104
	Year 4	116
	Year 5	125

MANGROVE JACK GROWTH

GROWTH (MM)

y = 40.593ln(x) - 179.86

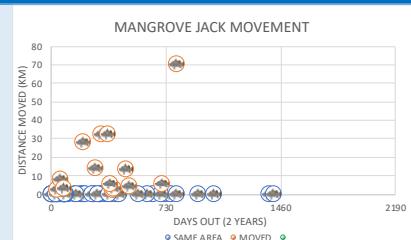
DAYS OUT (YEARS)

## **SURVIVAL**

## MOVEMENT

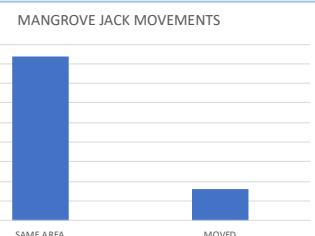
**Mangrove Jack movement in harbour  
Distance moved (km)  
2016-2025**

Recaptures	87
Same area	73 (84%)
In harbour	11 (13%)
Outside harbour	3 (3%)



**Mangrove Jack movement  
2016-2025**

Movement	72 (84%)
Same area	72 (84%)
Moved	14 (16%)



**Mangrove Jack outside harbour  
Tagged (pink fish)  
Recaptured (blue fish)  
2016-2025**

**Masthead Reef (70km)  
Gladstone offshore (28Km)  
Pancake Creek (32km)**



## LOCATIONS

Mangrove Jack

Tagged

(red-orange heat map)

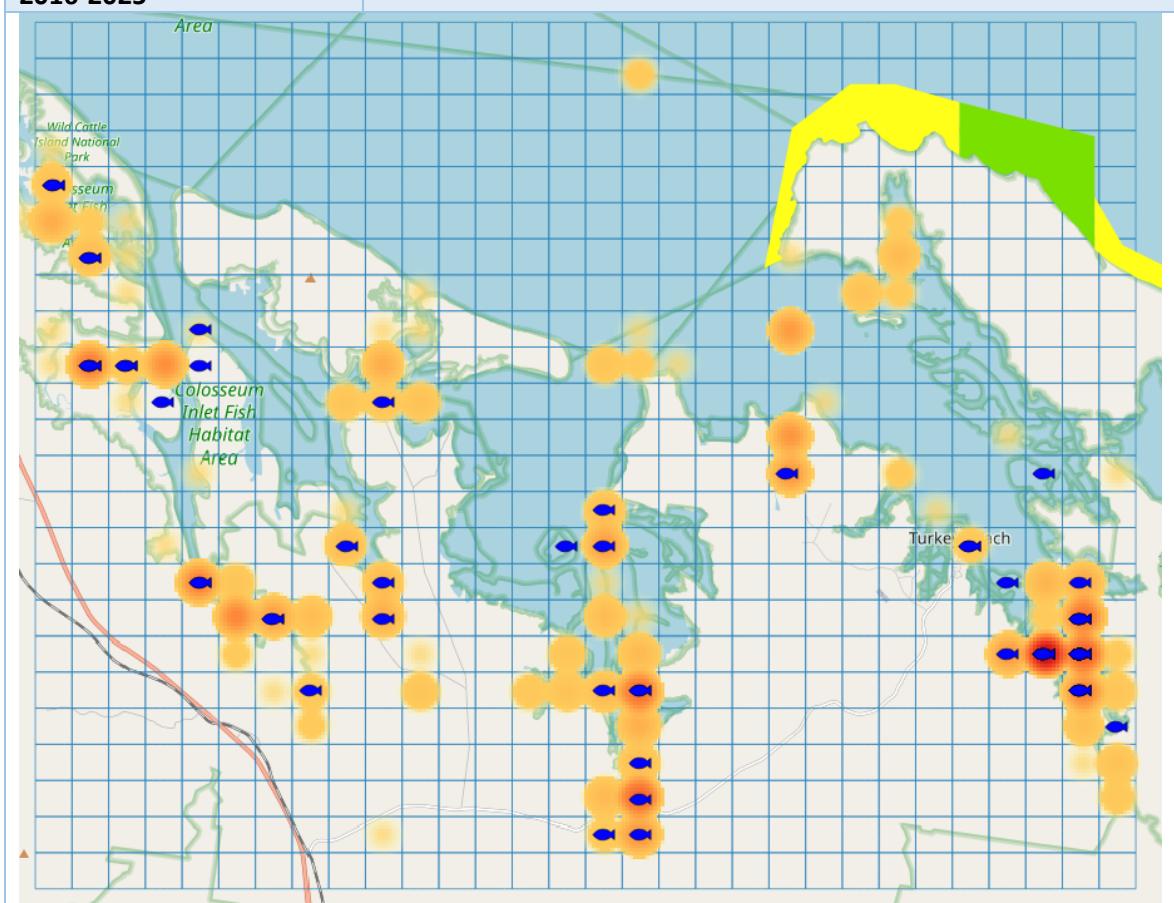
Recaptured

(blue fish)

2016-2025

Tagged  
Recaptured

1042  
87



## BARRED JAVELIN



### DATA RELIABILITY

**Sample size (days fished)**

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

**Tagged (blue arrow)**

**Recaptures (orange arrow)**

**Confidence %**

**Error %**

**2021-2025**



### TAGGED AND TAG RATE

**Taggers catch and effort**

High      Low      Now

**Tagged fish (1392)**

Tagged fish

**Tag days (1296)**

2020      2024      2025

**2016-2025**

446      14      168

**Days**

2020      2023      2025

**2016-2025**

213      64      102



**Barred Javelin**

Tagged      1392

**Tagged**

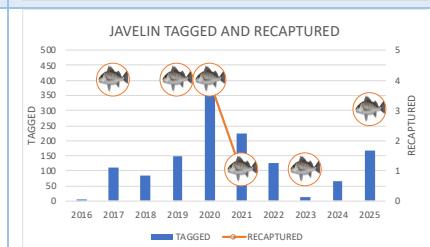
Recaptured      17

**Recaptured**

Recapture rate      1.2%

**2016-2025**

Tagged 2025      168



**Tag rate**

High      Low      Now

**Javelin**

Tag rate

**2016-2025**

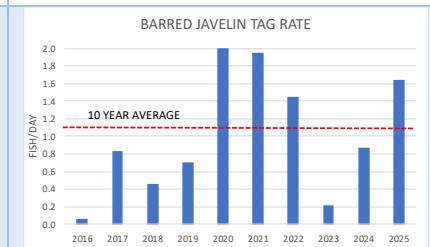
2020      2016      2025

**2016-2025**

2.1      0.1      1.6

**10 year average**

1.1



## LENGTHS

<b>Average length (mm)</b> <b>Bars show smallest to largest fish</b> <b>2016-2025</b>	High	Low	Now	
	Average length			
	2019	2023	2025	
	425	353	447	
	Largest			
	2020	2023	2025	
	710	550	680	

## MOVEMENT

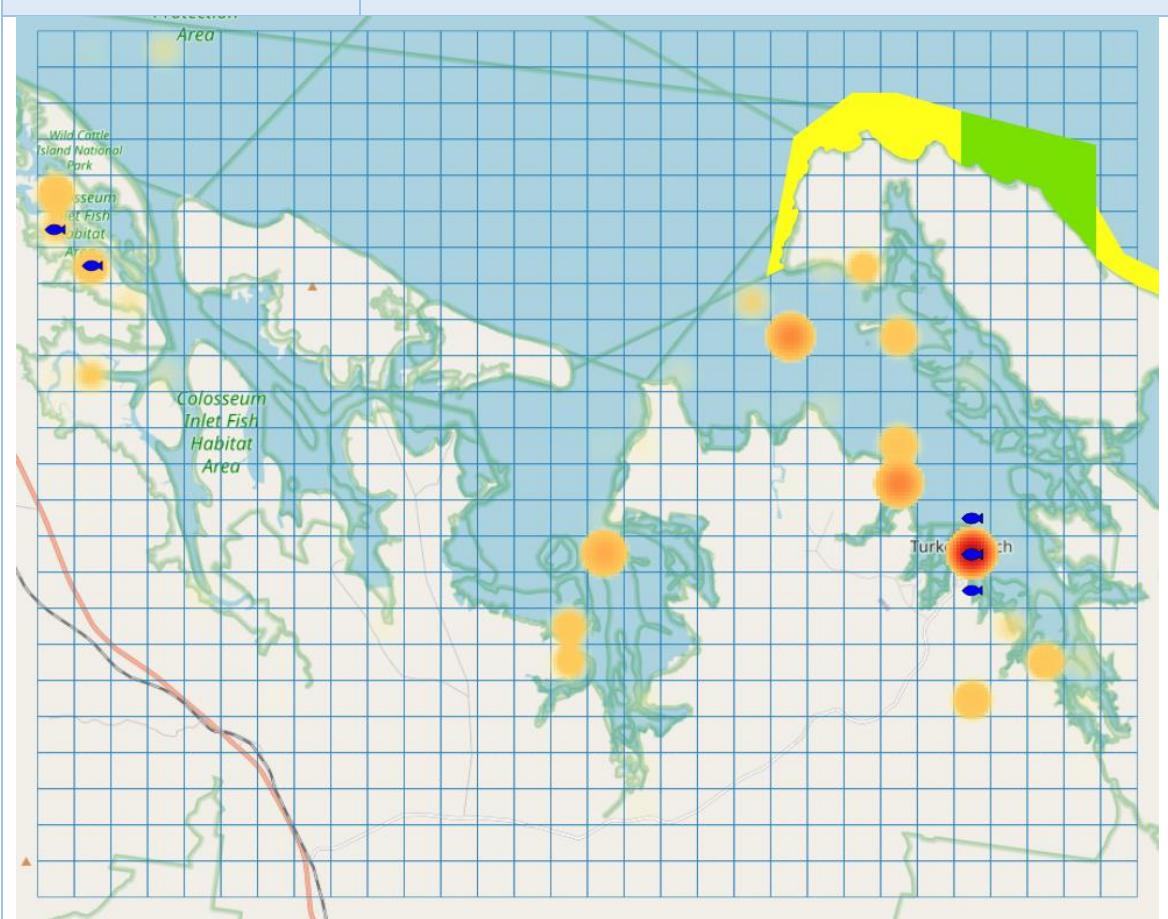
<b>Javelin movement</b> <b>Distance moved (km)</b> <b>2016-2025</b>	Recaptures	16	
	Same area	13 (81%)	
	Max distance (km)	3	
<b>Javelin movement</b> <b>Distance moved (km)</b> <b>2016-2025</b>	Recaptures	16	
	Same area	13 (81%)	
	Moved	3 (19%)	

## TAG LOCATIONS

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

Tagged  
Recaptured

1392  
17



## Data sources

Data used in the Rodds Harbour Crystal Bowl are:

- Tag records and recapture records for Rodds Harbour at <http://crystalbowl.infofishaustralia.com.au/>.
- Rainfall records from Station 39018 Bustard Head Lighthouse and from Station 39261 Turkey Station from <http://www.bom.gov.au/climate/data/index.shtml>.

## 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 fisher days (at least 1 per month) to provide an acceptable catch rate.
- For Dusky Flathead undersized fish are <400mm, legal fish are >=400 and <700mm and trophy fish are >=700mm.
- For Mangrove Jack undersized fish are <350mm, legal fish are >=350mm and <500mm and trophy fish are >=500mm.
- For Barred Javelin undersized fish are >400mm, legal fish are >=400mm and <600 and trophy fish are >=600mm.
- Growth calculated using logarithmic curve from recaptures where fish were out for 90 days or more and had positive growth.
- Locations based on Infofish grid map RBT and other grid maps where fish were recaptured outside the harbour.
- Movement distance calculated as the shortest distance by water from the tag to the recapture location using Google Earth.
- Distance from where recapture fishers live to recapture location is the straight-line distance between locations based on Google Earth coordinates with Local <80km, Intrastate >=80km and Qld postcode, Interstate postcodes other than Qld.