



## SANDY STRAITS REVIEW 2025

### INFORMATION RATING



Key species: Mangrove Jack, Dusky Flathead, Barramundi

Fish timeframe: 2016-2025

Fisher timeframe: 2021-2025

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Department of Agriculture and Fisheries

## SANDY STRAITS OVERVIEW

While data for the area is limited it provides basic information that is indicative of the fishing in the area for the species tagged. Sandy Straits and rivers and creeks in this area are mostly fished by locals and visiting fishers coming from the Sunshine Coast and Brisbane.

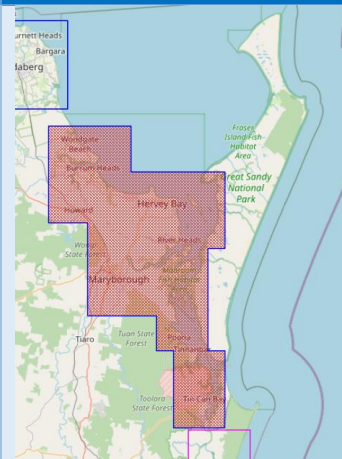
The area is fished for a wide range of species with taggers targeting mainly Flathead, Mangrove Jack and Barramundi and these species account for 53% of the fish tagged. Taggers tag a high proportion of the key species they catch which is reflected in the numbers of legal fish tagged.

Tagging of Mangrove Jack was boosted by fish tagged in the Tag-a-Jack competition at Tin Can Bay in Nov-Dec 2021 and again in Nov-Dec 2023.

The area is mainly a harvest fishery for the tagged species with around 51% of legal fish of the key species recaptured being kept by fishers (other than taggers). For other species caught in the area such as Whiting and Bream it is expected these are largely harvested.

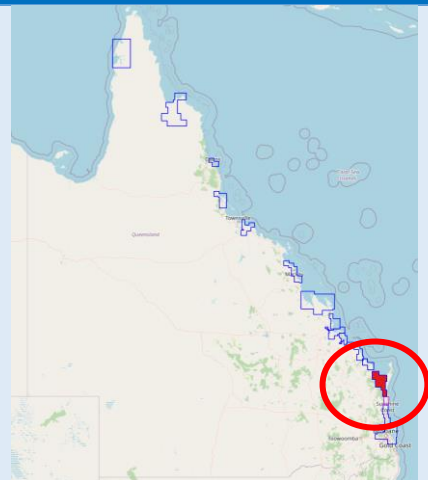
The Great Sandy Marine Park rezoning was proclaimed in May 2024. With extended conservation zones this will result in a reduction in commercial gillnet fishing. This is likely to lead to changes in fishing in the area over the next few years.

## SANDY STRAITS LOCATION



Woodgate  
25.1°S  
152.58°E

Tin Can Bay  
25.9°S  
153.03°E

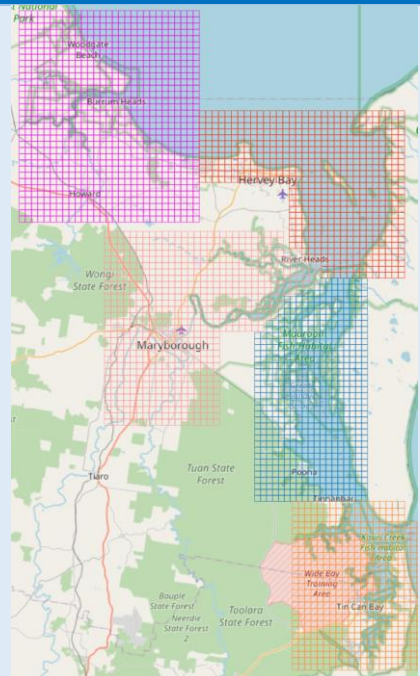


## WATERWAYS

### Maps

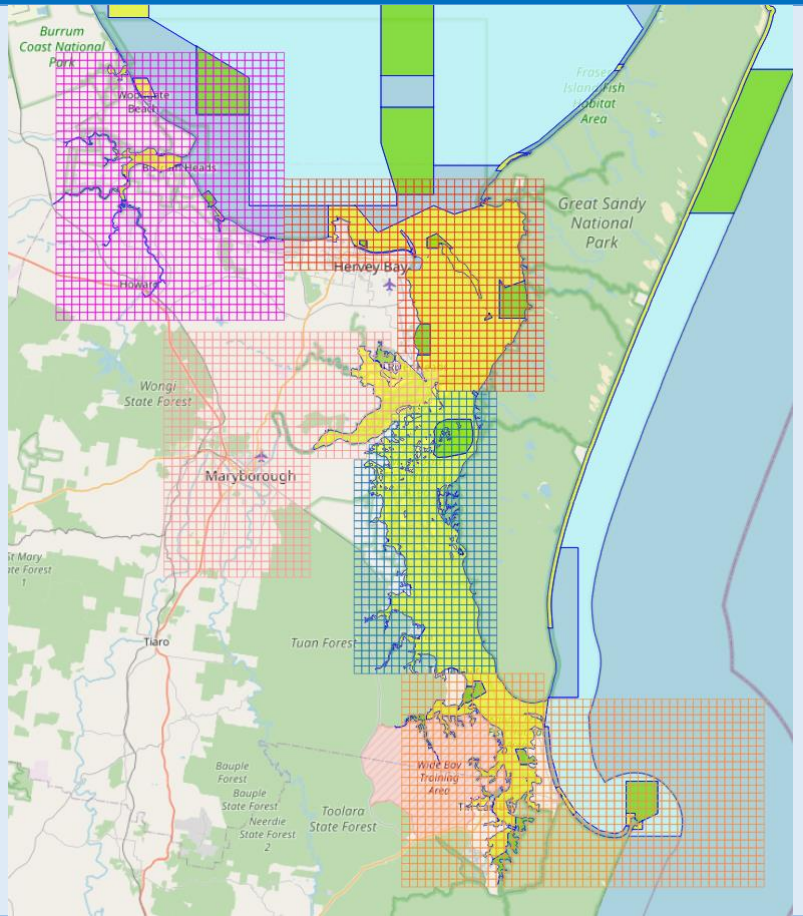
**Burrum Heads (WBH)**  
**Hervey Bay (HVY)**  
**Mary River (MRM)**  
**Maaroom (SSM)**  
**Wide Bay (TCN)**

Theodolite Creek  
Burrum River  
Sandy Straits  
Mary River estuary  
Tin Can Bay



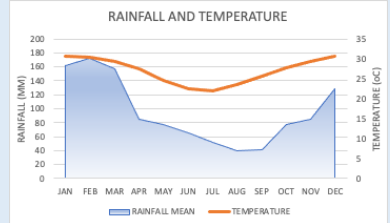
# GREAT SANDY MARINE PARK

Great Sandy Marine Park  
Declared 21 May 2024  
Zonings and tag grid maps

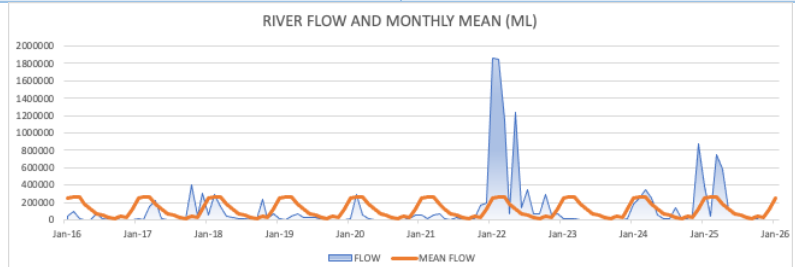


## ENVIRONMENTAL

Average rainfall (mm)  
Mean maximum day  
temperature (°C)

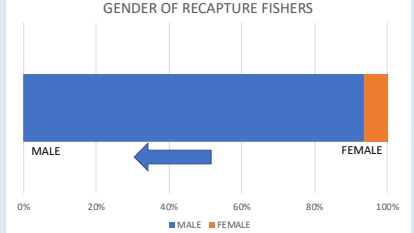
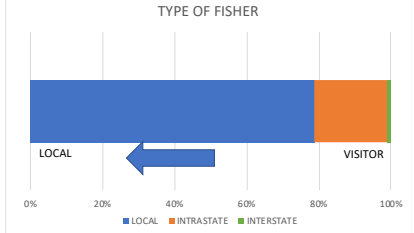
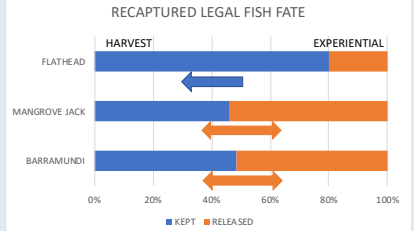
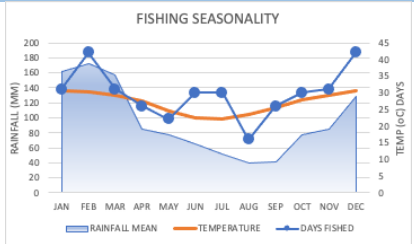


Mary River flows (ML)  
2021-2025



FISHERS		
DATA RELIABILITY		
Sample size (days fished)	Reliability level	LOW 41 MODERATE 68 MODERATE 271 HIGH 664
Tag days (blue arrow)	Samples	10 80% 80% 90% 90% 95% 99%
Recaptures (orange arrow)	Confidence	20% 10% 10% 5% 5% 5%
Confidence %	Error	
Error %		
2021-2025		
TYPE OF FISHERY		
Fishing seasonality	Months most fished	Dec
Mean rainfall (mm)	Days fished	Feb
Mean temperature (oC)		
Days fished combined		
Taggers		
Recapture fishers		
2021-2025		
Harvest or experiential fishery	Key species legal fish kept	
Release rate of recaptured legal fish of key species (ex-taggers)	Legal fish	92
2016-2025	Kept	45 (49%)
	Released	47 (51%)
Local or visitor fishery	Recapture fishers	94
Where recapture fishers live	Local	74 (79%)
2021-2025	Visitors	20 (21%)
Gender of recapture fishers (ex-taggers)	Recaptures	92
2021-2025	Male	86 (93%)
	Female	6 (7%)

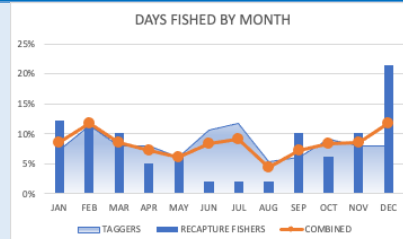
Reliability level	LOW	MODERATE	MODERATE	HIGH
Samples	10	41	68	271
Confidence	80%	80%	90%	90%
Error	20%	10%	10%	5%



# FISHER ACTIVITY

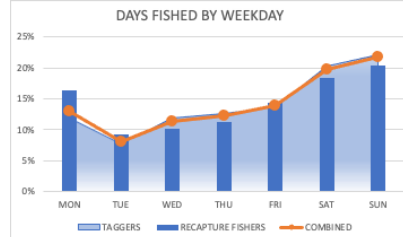
**Monthly activity**  
 Days fished combined  
 Taggers (262)  
 Recapture fishers (98)  
 2021-2025

Most fished	Month	%
	Feb	12%
	Dec	12%

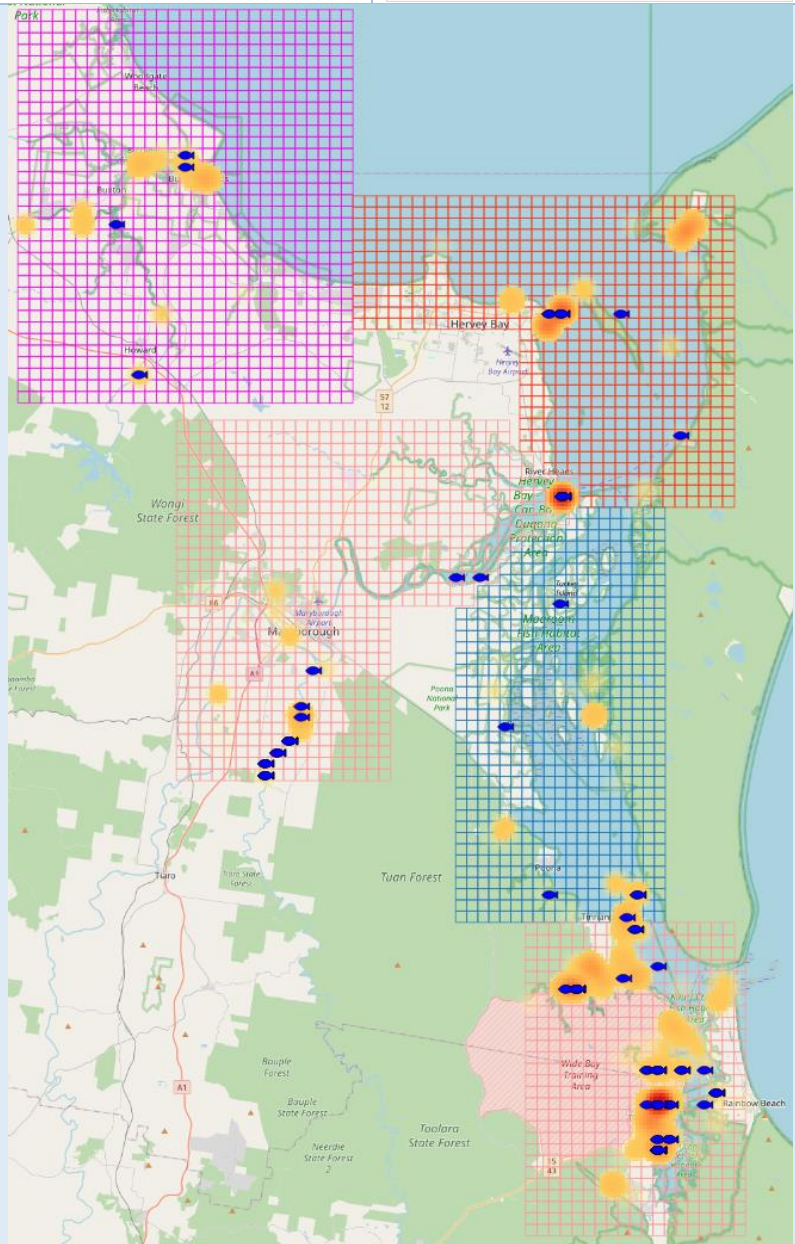


**Weekday activity**  
 Days fished combined  
 Taggers (262)  
 Recapture fishers (98)  
 2021-2025

	Fished	%
Weekdays		59%
Weekends		41%



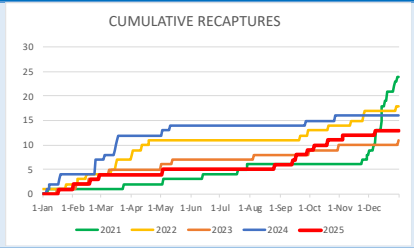
**Location activity**  
 Fish tagged (1106)  
 (red-orange heat map)  
 Recaptured (101)  
 (blue fish)  
 2021-2025



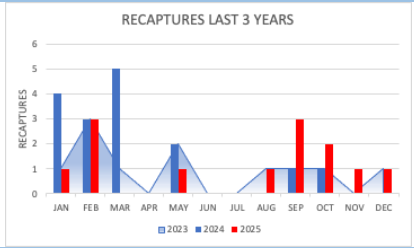
# FISHER EFFORT

**Cumulative recaptures  
2020-2024**

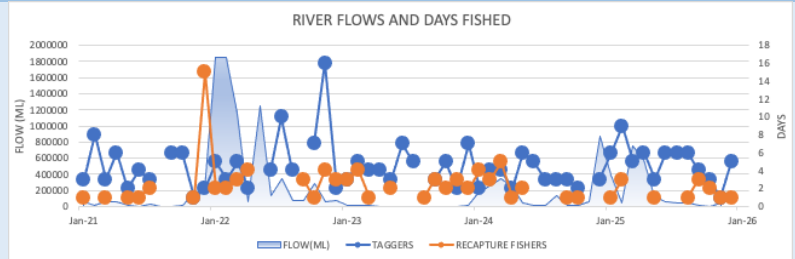
Year	Recaps
2021	24
2022	18
2023	11
2024	16
2025	13



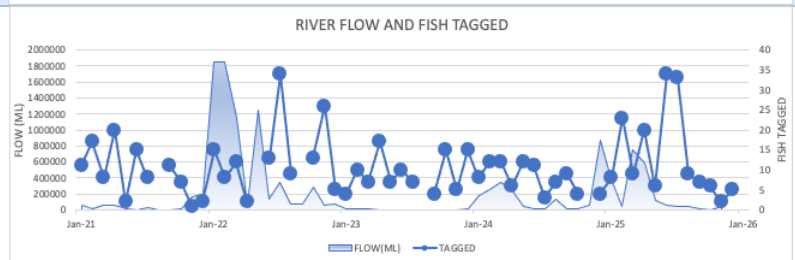
**Recaptures by month  
Last 3 years  
2023-2025**



**Fisher effort  
Taggers days (blue dots)  
Recapture fishers days  
(orange dots)  
2021-2025**



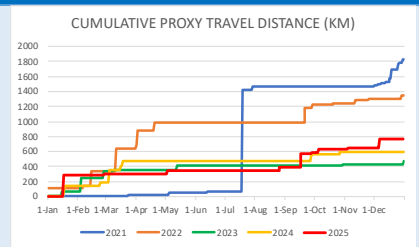
**Fisher effort  
Fish tagged (blue dots)  
2021-2025**



## FISHER TRAVEL

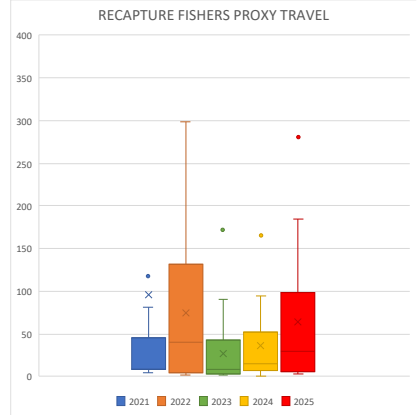
**Recapture fishers  
Cumulative distance (km)  
home to recapture  
location  
2021-2025**

Year	Km
2021	1826
2022	1342
2023	472
2024	599
2025	766



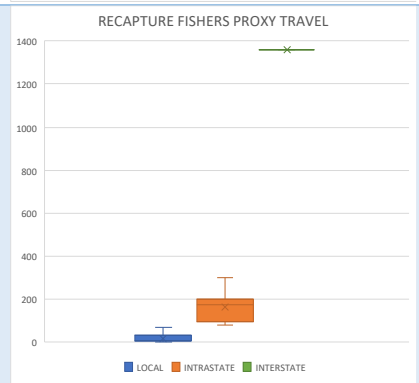
**Recapture fishers  
Distance (km) home to  
recapture location  
2021-2025**

Interstate not included



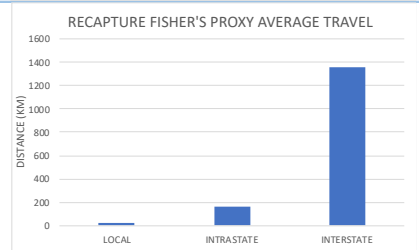
**Distance (km) home to  
recapture location  
(ex- interstate)  
Bars show distance range  
Dots show outliers  
2021-2025**

	Trips	Range(km)
Local	62	1-72
Intrastate	16	81-298
Interstate	1	1358



**Average distance (km)  
from home to recapture  
location  
2021-2025**

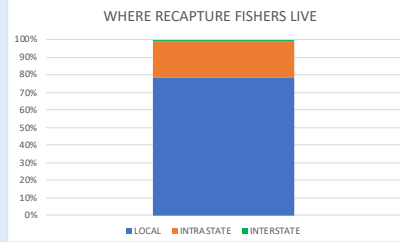
	Av distance (km)
Local	18
Intrastate	165
Interstate	1358



## WHERE RECAPTURE FISHERS LIVE

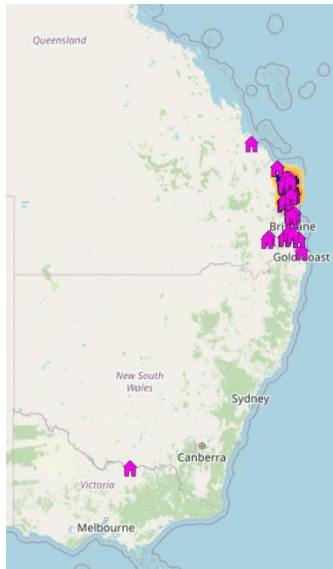
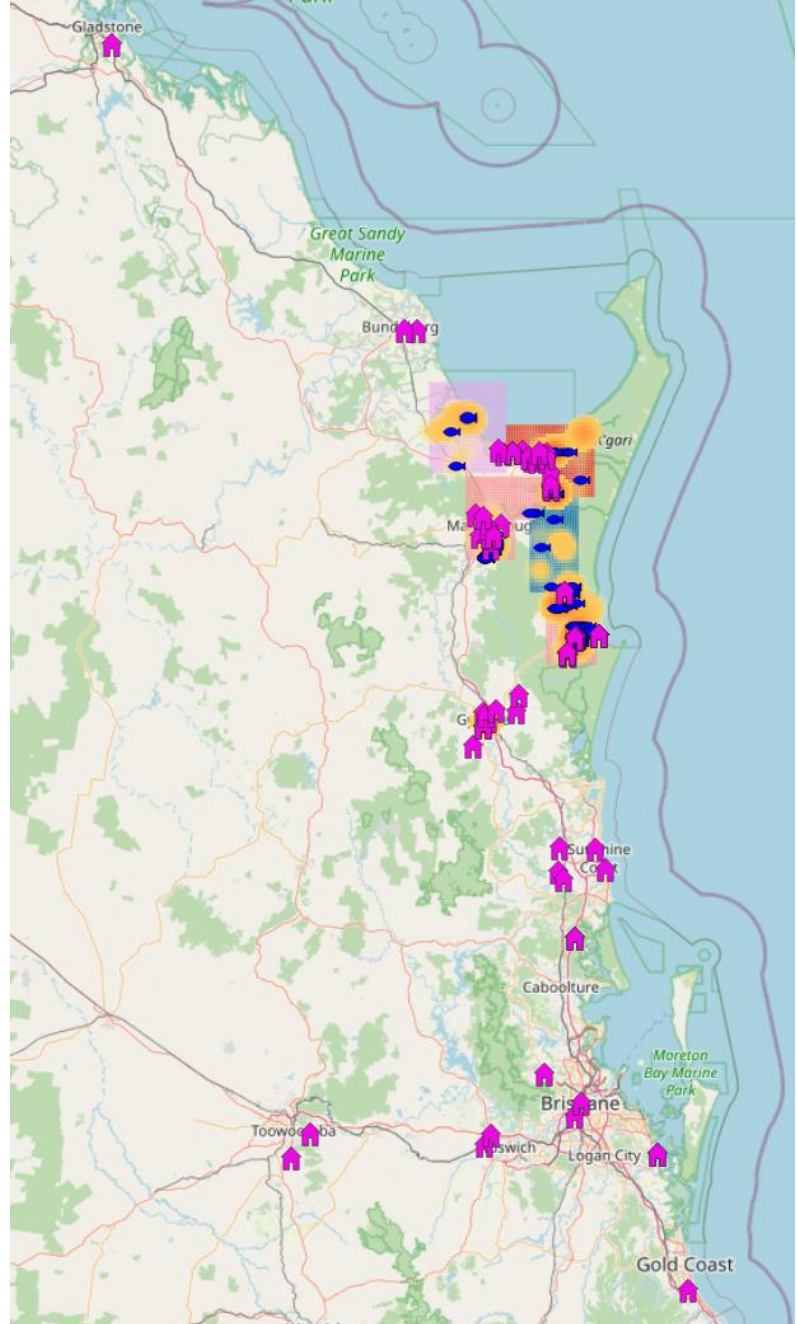
**Where recapture fishers live**  
2021-2025

Recapture fishers	
Local	74 (79%)
Intrastate	19 (20%)
Interstate	1 (1%)



**Where recapture fisher's live (pink houses)**

Local  
Intrastate  
Interstate  
2021-2025



## SANDY STRAITS KEY SPECIES

### BARRAMUNDI



### MANGROVE JACK



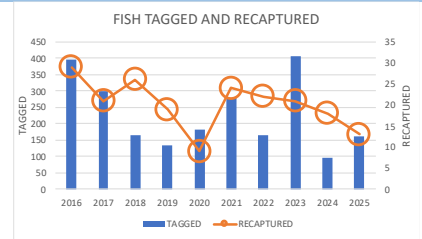
### DUSKY FLATHEAD



## TAGGED AND TAG RATE

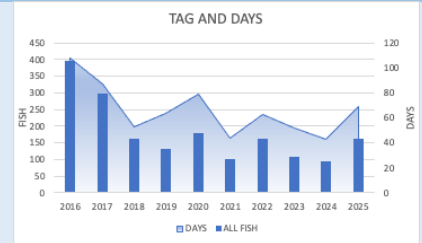
**Fish tagged  
Recaptured  
(includes Mangrove Jack  
tagged in Tag-a-Jack  
competitions)  
2016-2025**

Tagged	2281
Recaptured	202
Recapture rate	8.9%
Tagged 2025	162



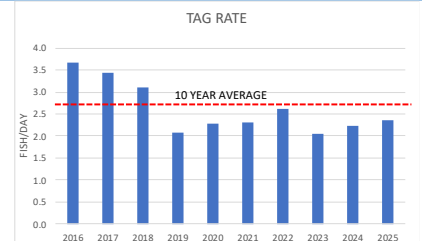
**Tag and effort taggers  
Fish tagged (1787)  
Days fished (617)  
(ex-competitions)  
2016-2025**

	High	Low	Now
Tagged fish			
2016	2024		2025
	397	96	162
Days			
2016	2024		2025
	105	38	69



**Tag rate  
All tagged fish  
Fish/day  
(ex-competitions)  
2016-2025**

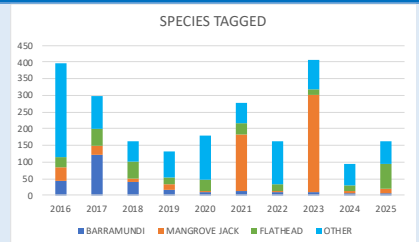
	High	Low	Now
Tag rate			
2016	2023		2025
	3.6	2.1	2.3
10 year average			2.7



## SPECIES

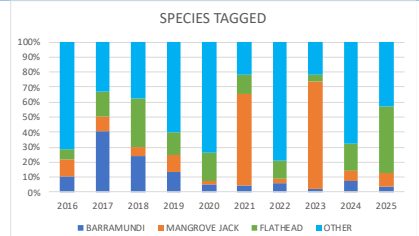
**Species composition  
Numbers tagged  
2016-2025**

Barramundi	276
Mangrove Jack	587
Dusky Flathead	348
Other species	1070



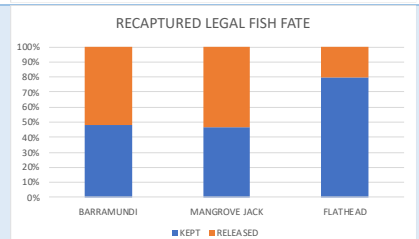
**Species composition  
Percentage tagged  
2016-2025**

Barramundi	12%
Mangrove Jack	26%
Dusky Flathead	15%
Combined	53%



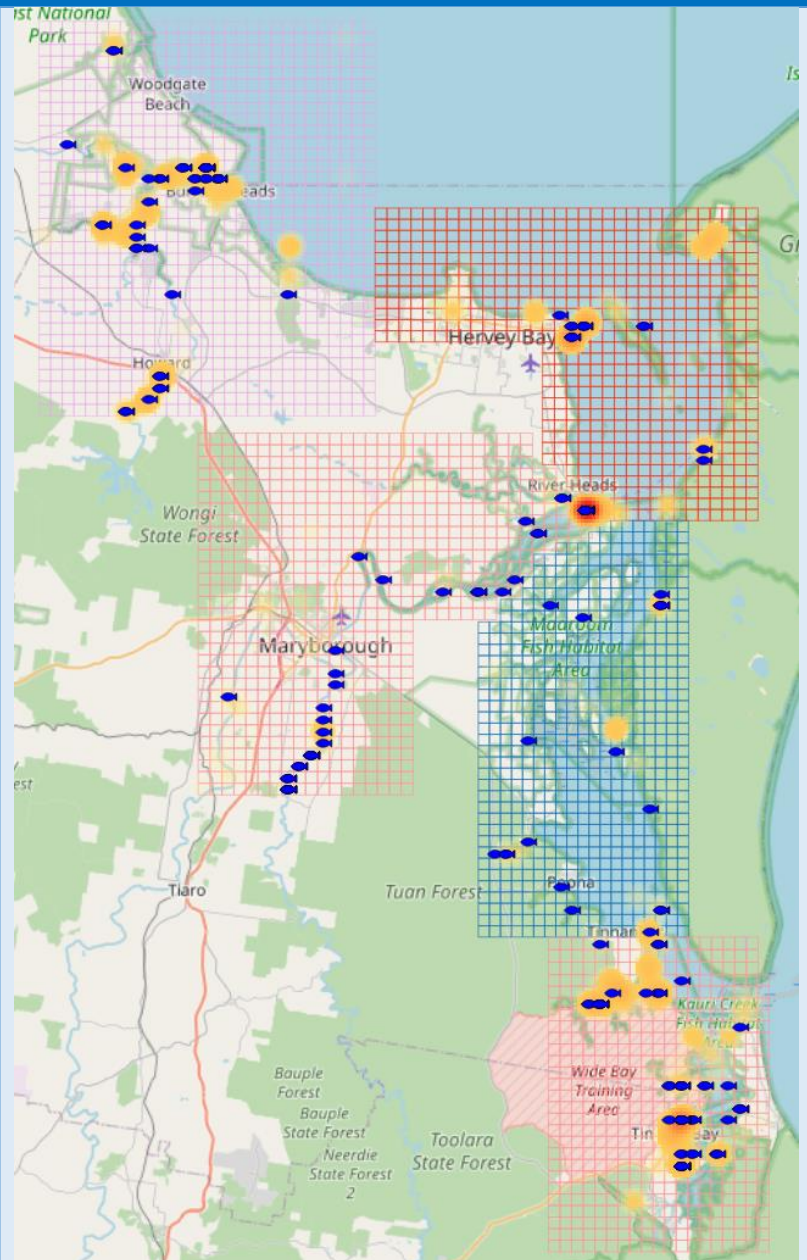
**Legal recaptures kept or  
released by recfishers (ex-  
taggers)  
2016-2025**

Legal recaptures kept	
Mangrove Jack	25 (46%)
Barramundi	16 (48%)
Flathead	4 (80%)



## LOCATIONS

All fish  
Tagged (2280)  
(red-orange heat map)  
Recaptured (203)  
(blue fish)  
2016-2025



# BARRAMUNDI



## DATA RELIABILITY

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

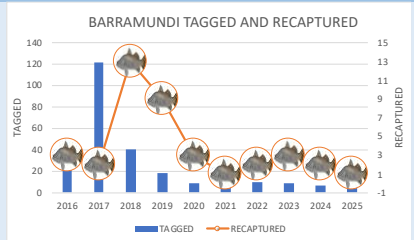
Reliability level	LOW		MODERATE		MODERATE		HIGH	
Samples	10	41	68	271	384	664		
Confidence	80%	80%	90%	90%	95%	99%		
Error	20%	10%	10%	5%	5%	5%		



## TAGGED

**Barramundi**  
**Tagged**  
**Recaptured**  
**2016-2025**

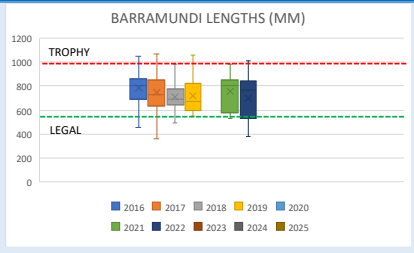
Tagged	276
Recaptured	39
Recapture rate	14.1%
Tagged 2025	6



## LENGTHS

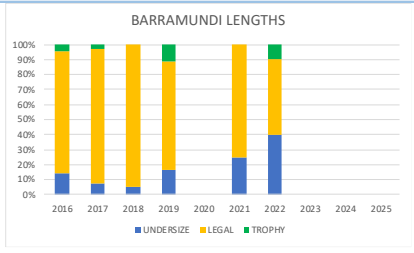
**Average length (mm)**  
**Bars show length range**  
**Dots show outliers**  
**2016-2025**

	High	Low	Now
Average length			
2016		2022	2025
	781	701	NA
Max			
2017		2021	2025
	1070	980	NA



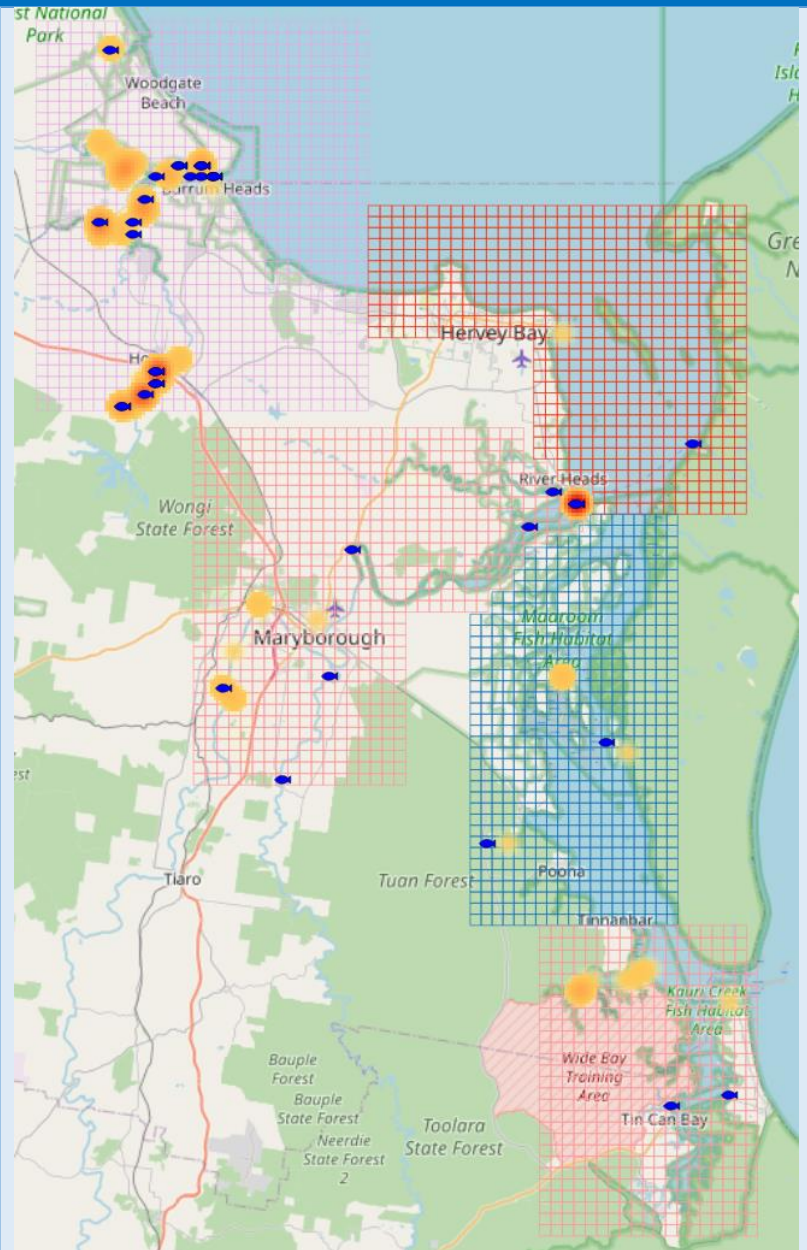
**Fish lengths percentage**  
**Undersize <580mm**  
**Legal 580-1000mm**  
**Trophy 1000+mm**  
**2016-2025**

	High	Low	Now
Legal-trophy			
2018		2022	2025
	95%	50%	NA
Trophy			
2019		2021	2025
	11%	0%	NA



## LOCATIONS

**Barramundi**  
**Tagged (276)**  
**(red-orange heat map)**  
**Recaptured (39)**  
**(blue fish)**  
**2016-2025**



# MANGROVE JACK



## DATA RELIABILITY

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

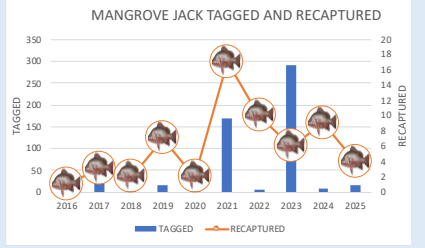
Reliability level	LOW	MODERATE	MODERATE	HIGH
Samples	10	41	68	271
Confidence	80%	80%	90%	90%
Error	20%	10%	10%	5%



## TAGGED

**Mangrove Jack**  
**Tagged**  
**Recaptured**  
**Recapture rate**  
**(includes Tag-a-Jack competition fish)**  
**2016-2025**

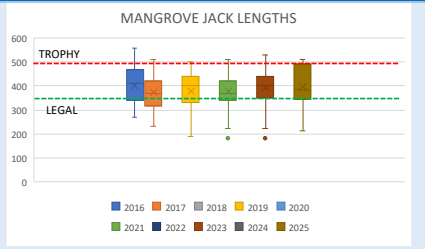
Tagged	587
Recaptured	61
Recapture rate	10.4%
Tagged 2025	15



## LENGTHS

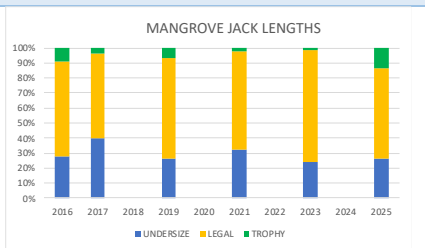
**Average length (mm)**  
**Bars show length range**  
**Dots show outliers**  
**2016-2025**

High	Low	Now
Average length		
2016	2017	2025
400	373	399
Max		
2016	2019	2025
560	500	510



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

High	Low	Now
Legal-trophy		
2023	2017	2025
75%	56%	60%
Trophy		
2016	2023	2025
9%	1%	13%



## LOCATIONS

Mangrove Jack (includes fish tagged in Tag-a-Jack competitions 2021 and 2023 in the Tin Can Bay area)

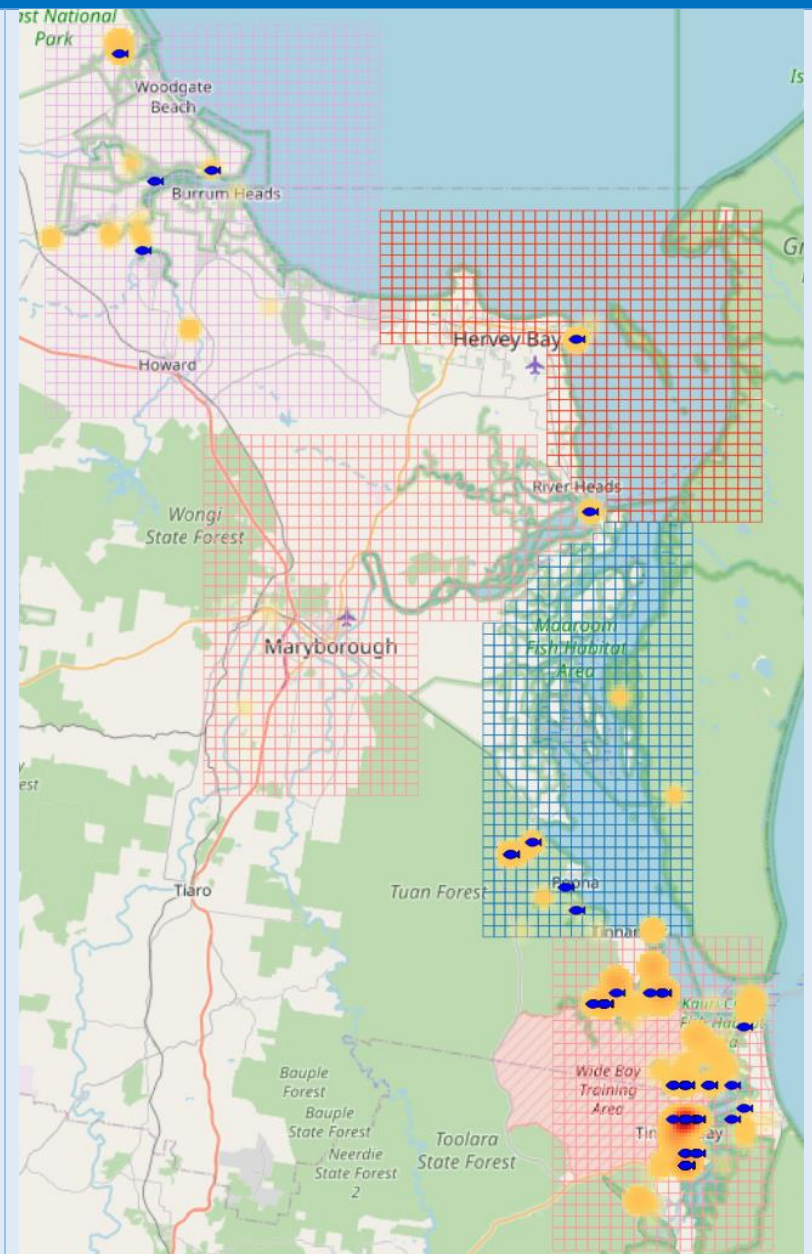
Tagged (587)

(red-orange heat map)

Recaptured (62)

(blue fish)

2016-2025

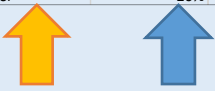


# FLATHEAD



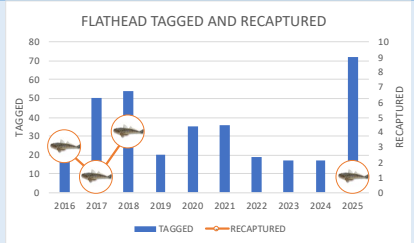
## DATA RELIABILITY

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



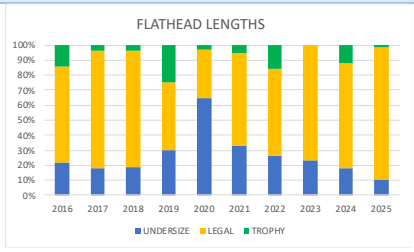
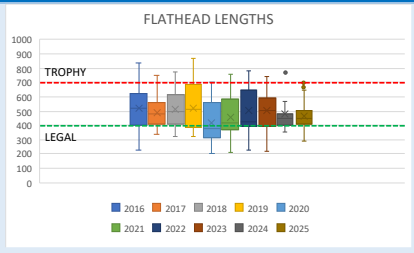
## TAGGED

<b>Flathead</b>	Tagged	348
<b>Tagged</b>	Recaptured	9
<b>Recaptured</b>	Recapture rate	2.6%
<b>2016-2025</b>	Tagged 2025	72



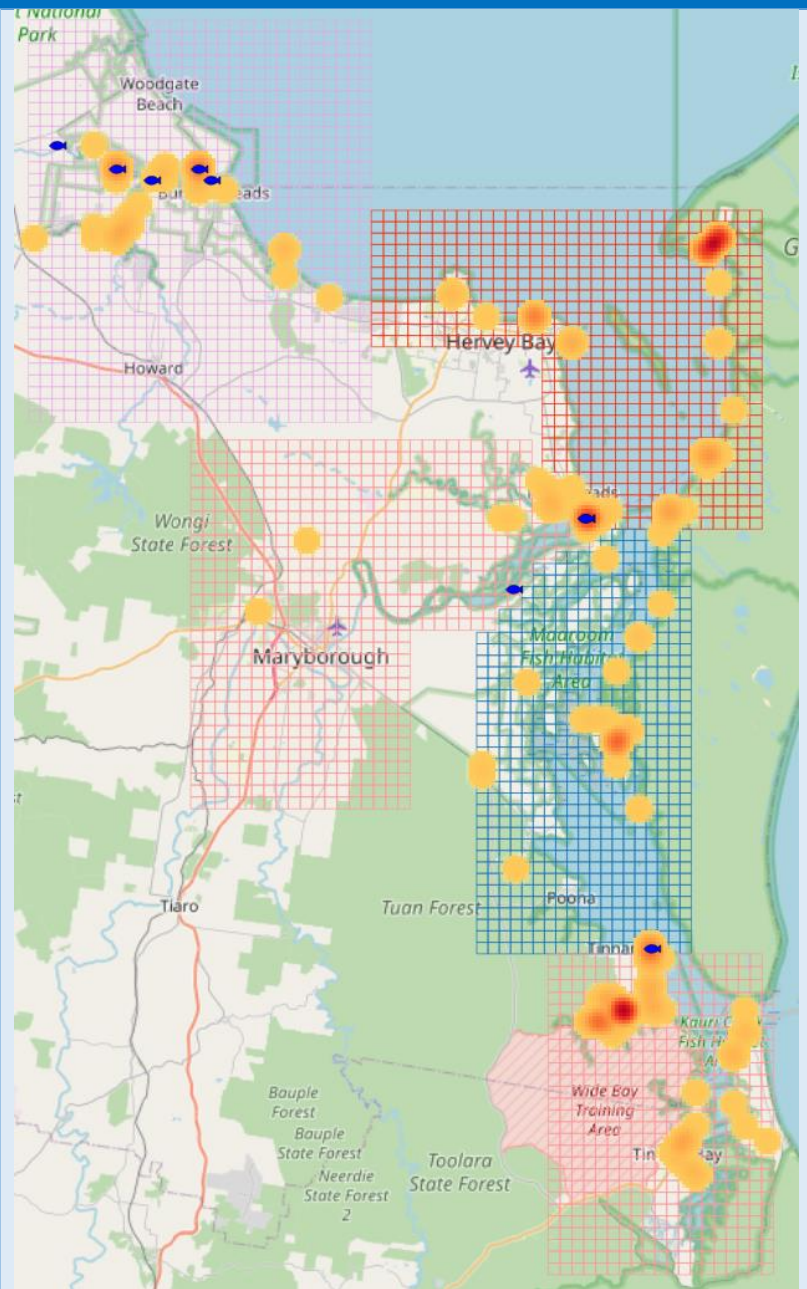
## LENGTHS

<b>Average length (mm)</b> <b>Bars show length range</b> <b>Dots show outliers</b> <b>2016-2025</b>	High	Low	Now
	Average length		
	2019	2020	2025
<b>Fish lengths percentage</b> <b>Undersize &lt;400mm</b> <b>Legal 400-700mm</b> <b>Trophy 700+mm</b> <b>2016-2025</b>	High	Low	Now
	Legal-trophy		
	2017	2020	2025
Trophy			
2019	2023	2025	
Undersize			
2019	2023	2025	



## LOCATIONS

Flathead  
Tagged (348)  
(red-orange heat map)  
Recaptured (9)  
(blue fish)  
2016-2025



## Data sources

Data used in the Sandy Straits Crystal Bowl are:

- Tag records and recapture records for Sandy Straits at <http://crystalbowl.infofishaustralia.com.au/>.
- Flow records for Mary River at Home Park station 138014A from <https://water-monitoring.information.qld.gov.au/> .
- Rainfall and temperature records for Maryborough station 040126 from <http://www.bom.gov.au/>.
- Great Sandy Marine Park zoning from <https://www.qld.gov.au/environment/coasts-waterways/marine-parks/zoning/great-sandy-marine-park>.

## 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/days fished.
- For Dusky Flathead undersized fish are <400mm, legal fish are  $\geq 400$  and <700mm and trophy fish are  $\geq 700$ mm.
- For Mangrove Jack undersized fish are >350mm, legal fish are  $\geq 350$ mm and <500 and trophy fish are  $\geq 500$ mm.
- For Barramundi undersized fish are <580mm, legal-trophy fish are  $\geq 580$  and <1000mm and trophy fish are  $\geq 1000$ mm. Legal fish are 580-1200mm.
- Locations based on Infofish grid maps WBH, HVY, SSM, MRM and TCN and other grid maps where fish were recaptured outside the area.
- Travel proxy distance is the distance between where the fisher lives (address, suburb, town or postcode) and the recapture location. Local <80km, intrastate Qld elsewhere, interstate other than Qld.