



# Boyne Tannum Hookup

Do fishing competitions impact  
local fish stocks?



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Cover photographs: (Top) Wendi Parsons interviewing a fisher as part of the CapReef boat ramp surveys (Bottom) Catch of mixed fish from offshore during the 2007 Boyne Tannum Hookup.

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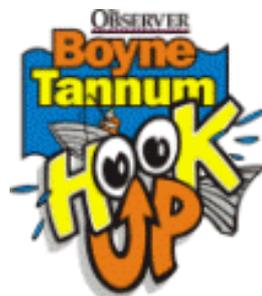
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Thanks also go to the recreational fishers that participated in the BTH who provided details of their fishing trips at boat ramp surveys during the events from 2005-2007. That support has enabled CapReef to provide a series of reports, including this one, on the fishing competition.



## About CapReef



CapReef is a community based monitoring program that was established following a series of changes to management of the Great Barrier Reef (GBR).

The purpose of CapReef is to improve community involvement and knowledge in management of the Capricorn part of the Great Barrier Reef ecosystem by monitoring and analysis of local effects of management changes on the GBR ecosystem.

In recent years significant changes were made to management arrangements of the GBR. Major changes resulted from:

- ❑ Fisheries (East Coast Trawl) Management Plan 1999
- ❑ Great Barrier Reef Marine Park Zoning Plan 2003
- ❑ Great Barrier Reef Coast Marine Park 2004
- ❑ Fisheries (Coral Reef Fin Fish) Management Plan 2003/04

As part of the consultation processes for the zoning changes in 2004 enforcement and monitoring emerged as significant community concerns. In response Capricorn Sunfish, GBRMPA Local Marine Advisory Committee and other interested groups developed the concept of a community based monitoring approach. This led to the birth of CapReef.

A number of projects were established under CapReef to collect data on the effects of the management changes, particularly on fish and fishers. Thus CapReef is a repository for data being collected in the Capricorn part of the GBR and is a major contributor to a number of research projects.



Projects to date have focused on:

- ❑ Coordinating CapReef and providing feedback to the community
- ❑ Measuring changes in catch and effort, relative abundance and size structure of key fish species
- ❑ Determining changes in fisher participation and fishing patterns resulting from the new Management Plans
- ❑ Obtaining information on the movement of key fish species from extended marine national park and conservation zones in the new Management Plans

CapReef has also provided support for Coral Trout monitoring around the Keppel Islands by James Cook University, collection and identification of larval reef fish by the Central Queensland University and water quality sampling at Rosslyn Bay by the Australian Institute of Marine Science.

An important part of CapReef is to provide feedback to the community a series of technical reports have been produced. This report is another in that series.

## Fish Species

Fish names cause considerable confusion as there are many names that can be applied to the same fish species, even in the same region. The Australian Fish Names Committee has developed a list of standard names (Yearsley et al 2006). A copy of the Australian Fish Names List is available from [www.fishnames.com.au](http://www.fishnames.com.au). CapReef uses the Standard Name for fish species in all reports.

Standard Name	Local Names	Scientific Name
Barcheek Coral Trout	Coral Trout, Island Coral Trout, Inshore Coral Trout	<i>Plectropomous maculatus</i>
Common Coral Trout	Coral Trout	<i>Plectropomous leopardus</i>
<i>The identification of these two species is often confused by those inexperienced with the species and are collectively referred to as Coral Trout</i>		
Goldspotted Rockcod	Cod, Estuary Cod, Goldspot Cod	<i>Epinephelus coioides</i>
Blackspotted Rockcod	Cod, Estuary Cod, Blackspot Cod	<i>Epinephelus malabaricus</i>
<i>These two species are collectively referred to as Estuary Cod however their identification should not be confused</i>		
Longfin Rockcod	Matty Cod, Wirenetting Cod	<i>Epinephelus quoyanus</i>
Saddletail Snapper	Largemouth Nannygai, Red Jew	<i>Lutjanus malabaricus</i>
Crimson Snapper	Smallmouth Nannygai, Red Jew	<i>Lutjanus erythropterus</i>
<i>These two tropical Snapper species are collectively referred to as Red Snapper as there is often confusion in their correct identification</i>		
Red Emperor	Red Emperor	<i>Lutjanus sebae</i>
Stripey Snapper	Stripey	<i>Lutjanus carponatus</i>
Moses Snapper	Moses Perch, Fingermark	<i>Lutjanus russelli</i>
Hussar	Hussar, Inshore Hussar	<i>Lutjanus adetii</i>
Brownstripe Snapper	Hussar	<i>Lutjanus vitta</i>
<i>These two species are collectively referred to as Hussar even though there is little confusion with their identity</i>		
Venus Tuskfish	Parrotfish	<i>Choerodon venustu</i>
Blackspot Tuskfish	Parrotfish, Bluetooth	<i>Choerodon schoenleinii</i>
<i>These species are collectively referred to as Parrotfish and there may be some confusion in their correct identification</i>		
School Mackerel	School Mackerel, Doggie Mackerel	<i>Scomberomorus queenslandicus</i>
Spotted Mackerel	Spotty Mackerel	<i>Scomberomorus munroi</i>
<i>These two Mackerel species are often confused and it is likely that some incorrect identification has occurred</i>		
Spanish Mackerel	Spanish Mackerel, Narrowbarred Mackerel	<i>Scomberomorus commerson</i>
Cobia	Cobia, Black Kingfish	<i>Rachycentron canadus</i>
Redthroat Emperor	Redthroat, Sweetlip, Lipper	<i>Lethrinus miniatus</i>
Grass Emperor	Grassy, Grass Sweetlip, Redthroat	<i>Lethrinus fletus</i>
Barred Javelin	Grunter, Barred Grunter	<i>Pomadasyds kaakan</i>

<b>Standard Name</b>	<b>Local Names</b>	<b>Scientific Name</b>
King Threadfin	King Salmon	<i>Polydactylus macrochir</i>
Blue Threadfin	Blue Salmon	<i>Eleutheronema tetradactylum</i>
Barramundi	Barramundi	<i>Lates calcarifer</i>
Collar Seabream	Iodine Bream, Baldy Bream	<i>Gymnocranius audleyi</i>
Painted Sweetlips	Blackall, Moke, Morwong	<i>Diagramma pictum</i>
Scribbled Rabbitfish	Happy Moment, Spinefoot	<i>Siganus spinus</i>
Starry Triggerfish	Triggerfish	<i>Abalistes stellaris</i>
Wolf Herring	Ribbonfish	<i>Chinocentrus dorab</i>
Remora	Remora, Suckerfish	<i>Remora remora</i>
Blueface Whiptail	Whiptail	<i>Pentapodus paradiseus</i>
Bream	Bream, Yellowfin Bream, Pikey Bream	<i>Acanthopagrus australis</i> <i>Acanthopagrus berda</i>
Trevally	Trevally	<i>Number of species</i>
Fusilier	Fusilier	<i>Caesio spp</i>
Grinner	Grinner, Lizardfish	<i>Saurida spp</i>
Shark	Shark	<i>Number of species</i>

Table 1: Names used for key fish species in CapReef reports

## Summary

Fishing competitions are a popular focus for recreational fishers throughout Queensland. Many are high profile events that get reported in the media and the images that are shown often assist in forming the general public's view of recreational fishing. This has led to CapReef being asked the question "Do major fishing competitions significantly impact local fish stocks?" To assist in answering that question CapReef has worked with the Boyne Tannum Hookup to determine the impact of this major competition.

The Boyne Tannum Hookup (BTH) is a long running and highly popular competition held on the June long weekend each year. Entry has been so popular that the number of entrants has been limited to 3,000 which is always fully subscribed. Fishers can fish anywhere but are required to present their catch at the BTH headquarters at Bray Park near the mouth of the Boyne River at Boyne Island.

The BTH has been assessed under the National Environmental Assessment of Tournament Fishing (NEATFish) and received a 3.5 star (maximum 5) rating in 2007.

From 2005-2007 fishing catch and effort information has been collected from competitors in the event. From 2000 information has been collected on fish tagged and released in the live weigh in section.

To assist in assessing the impact on local fish stocks the catch rates of competitors were compared with corresponding winter catch rates for CapReef. This included total fish caught and fish kept. In all but one of the measures the CapReef catch rates were greater than the BTH catch rates (although the differences are not statistically significant in most cases). Only in 2007 for fish kept was the BTH catch rate higher. This suggests that the catch rates are not elevated during the BTH and are not substantially different to those across Central Queensland.

Another measure of the impact is the number of fish that are kept. It may be expected that for species nominated for competition prizes the proportion of fish kept may be higher. This showed that for most of the species where sufficient data was available there was little if any difference in the proportion of fish kept. For Threadfin a much higher proportion of fish were kept by CapReef fishers while for Mackerel a slightly higher proportion were kept by BTH competitors.

The results do not give any clear indication that competitors fished any more successfully, or that they were more likely to keep competition species, with the possible exception of Mackerel.

If competitors were specifically targeting eligible species for the competition it might be expected that these species would represent a higher proportion of the total catch during the competition. The percentage of kept eligible species of the total kept catch was higher for BTH competitors suggesting that competitors were likely targeting these species. However based on their catches they are no more likely to retain these species than CapReef fishers.

A comparison of trailers at the main Gladstone boat ramp at Auckland Creek was made based on the number of trailers that would be expected to be there under similar wind conditions on a weekend, the maximum numbers

of trailers under those wind conditions and the actual number of trailers observed. On 5 competition days where data were available the observed number of trailers was higher than the expected number but lower than the maximum number of trailers recorded. This suggests that more people fish during the competition but that the numbers are within the range observed for a typical weekend outside of the competition.

The catch rates for BTH competitors do not seem to be significantly higher than outside of the competition and they do not retain a greater proportion of their catch. This suggests that the total catch may be equivalent to or even less than on a busy weekend at the boat ramp.

However it is likely that competitors target the eligible species. This may cause a slightly higher number of these species to be caught over the competition than for a typical weekend. However based on the maximum number of fishers on weekends with similar weather, the take of these species is probably less than for a weekend when lots of fishers are on the water. This suggests that any increased take is probably small.

Another influence may be the targeting and take of large fish. At present CapReef has insufficient data to analyse any size differences between the competition period and the corresponding CapReef period.

Since 2000 there have been 2,321 fish live weighed, tagged and released. Of these 138 (5.9%) have been recaptured. This compares with the overall Suntag recapture rate of 7.7%. For Yellowfin Bream the BTH recapture rate is 5.3% compared with 4.3% for Suntag overall while for Pikey Bream the BTH rate is 7.7% compared with the Suntag rate of 4.8%. These recapture rates suggest that the handling and survival of fish released during the competition is comparable to the overall Suntag program.

All fish were released at the Bray Park boat ramp and 178 (96.7%) have been recaptured within 20km of the release site and 154 (86.5%) fish were recaptured within 6 months. Even fish that were recaptured up to 2 years after release were mostly caught within 20km. This suggests that most fish do not move a significant distance for the release site.

The maximum distance moves was a Dusky Flathead that moved 175km south to the Elliott River south of Bundaberg over 129 days.



# Boyne Tannum Hookup

Do fishing competitions impact local fish stocks?

## 1. Introduction

Fishing competitions are a popular focus for recreational fishers throughout Queensland. They vary greatly in the way they are organised and in their rules. Some are run as weighing in a catch of fish, others are organised around the weighing of large dead fish and others are catch and release events. Some competitions are combinations comprising elements of each approach.

Fishing competitions have been criticised because they are perceived to increase fishing effort and catch in an area and/or selectively remove large breeding fish (particularly those involving weighing dead fish where the winner is based on the largest fish weighed). It may be that this occurs or it may equally be that entrants fish as they would normally in the hope that they may make a prize winning catch.

The Boyne Tannum Hookup (BTH) (see [www.boynetannumhookup.org](http://www.boynetannumhookup.org)) is a long running and highly popular competition held on the June long weekend each year. Entry has been so popular (*figure 1*) that the number of entrants has been limited to 3,000 which is always fully subscribed. Fishers can fish anywhere but are required to present their catch at the BTH headquarters at Bray Park near the mouth of the Boyne River at Boyne Island.



Figure 1: Part of the crowd at the 2006 Boyne Tannum Hookup Bray Park headquarters

The event is conducted as a combination of weighing dead fish of nominated species with the largest fish winning in that category and a live weigh in of fish which are subsequently tagged and released. It has offshore, estuary and freshwater sections.

The popularity of the BTH probably relates to the significant prizes on offer, including a number of boats (up to 10 in some years) that are given away as draw prizes. It may be that the motivation of entrants is largely based around the lottery type draws for boats and other prizes rather than in competitively fishing for prizes for the largest fish.

While fishing can occur anywhere much of the fishing effort is carried out from Bray Park (*figure 2*) to allow fishers to weigh fish easily and take part in the many social activities associated with the BTH, including the draw prizes each evening (*figure 1*).

The BTH has been assessed under the National Environmental Assessment of Tournament Fishing (NEATFish) and received a 3.5 star (maximum 5) rating in 2007.



Figure 2: Boat trailers at Bray Park taking part in the 2006 Boyne Tannum Hookup

## 2. Aims

The aim of this study is to examine the catch and effort characteristics of the BTH to examine:

- Whether catch rates and the proportion of fish kept change during the competition period;
- Whether the species mix of the catch is influenced by the eligible species in the competition;
- Does fishing effort change over the competition period;
- What types of fish have been weighed as part of the live catch section; and
- Where have the tagged and released fish been recaptured.

## 3. Methods

Competitors in the BTH are allowed to fish anywhere and those taking part use boat ramps from the Narrows to Agnes Water and sometimes further afield. However much of the effort is associated with boat ramps from Gladstone to Tannum Sands. For offshore fishing most of the boats use the Bray Park boat ramp (*figure 3*) or the boat ramps in Auckland Creek in Gladstone. This makes it difficult to carry out an assessment of the total impact of the event.



Figure 3: Boats being launched at the Bray Park boat ramp during the Boyne Tannum Hookup

To assess the impact of the competition the focus has been on obtaining details of fishing trips from Bray Park and the main Gladstone boat ramps. Boat ramp surveys of fishers were conducted as they finished fishing and returned to these boat ramps over the competition period. The details of

how information was collected and analysed are contained in the documents "How much fishing effort is there?" (Platten, Sawynok and Parsons 2007a) and "What is the catch?" (Platten, Sawynok and Parsons 2007b).

The catch of the fishers in terms of catch rate (adjusted fish/person/trip) and catch composition was compared between the competition period and the general catch over the corresponding CapReef winter periods.

Effort measures for the competition period were compared with the modelled expected effort over the period based on counts of trailers observed at the boat ramps in Auckland Street in Gladstone and Bray Park at Boyne Island. For detailed description of methods see "How much fishing effort is there?" (Platten, Sawynok and Parsons 2007).

Details of methods used in the live weigh in section of the competition are described in "Boyne Tannum Hookup Live Fish Release Report 3" (Sawynok and Platten 2007).



Figure 4: Releasing fish after the live weigh in

#### 4. How many Fishing trips in Boyne Tannum Hookup?

Table 2 provides a summary of fishing trips where catch and effort details were obtained from a number of boat ramps used by competitors. In 2005 and 2006 details of almost 100% of offshore fishing trips were obtained at Bray Park while in 2007 details of almost 100% of both offshore and estuary trips were obtained at that ramp.

YEAR	BRAY PARK	AUCKLAND VMR	MORGAN STREET	OTHER RAMPS	TOTAL
2005	284			1	<b>285</b>
2006	142	58	11		<b>211</b>
2007	345	2	0	11	<b>358</b>
<b>TOTAL</b>	<b>771</b>	<b>60</b>	<b>11</b>	<b>12</b>	<b>854</b>

Table 2: Summary of number of fishing trips collected at each boat ramp during Boyne Tannum Hookup events

#### 5. Do catch rates change during the Boyne Tannum Hookup?

Catch rates are in part indicative of how "hard" fishers attempt to catch fish and thus their success rate. Catch rates over the competition period may indicate how dedicated the fishers were in attempting to catch fish and hence how successful they were. It might be that competitors are more "dedicated" during the competition and thus more successful. Catch rates are also a key input in predicting how many fish are caught. Consideration of catch rates in combination with the number of people fishing gives an indication of trends in the number of fish caught.

Catch rates were examined both for the total catch of fish (which includes both kept and released fish) and for the fish kept. A comparison was made between the catch rates during the competition and the catch rates for the corresponding winter for the CapReef area. The results are shown in *figures 5 and 6*.

If the catch rates from the BTH are compared with the winter catch rates from the CapReef surveys, in all but one of the measures the CapReef measures of catch rate were in fact greater than the BTH rates (although the differences are not statistically significant in most cases). Only in 2007 was the BTH kept catch rate higher than that of the CapReef catch rates. This suggests that catch rates are not elevated during the BTH and are not substantially different to those across central Queensland.

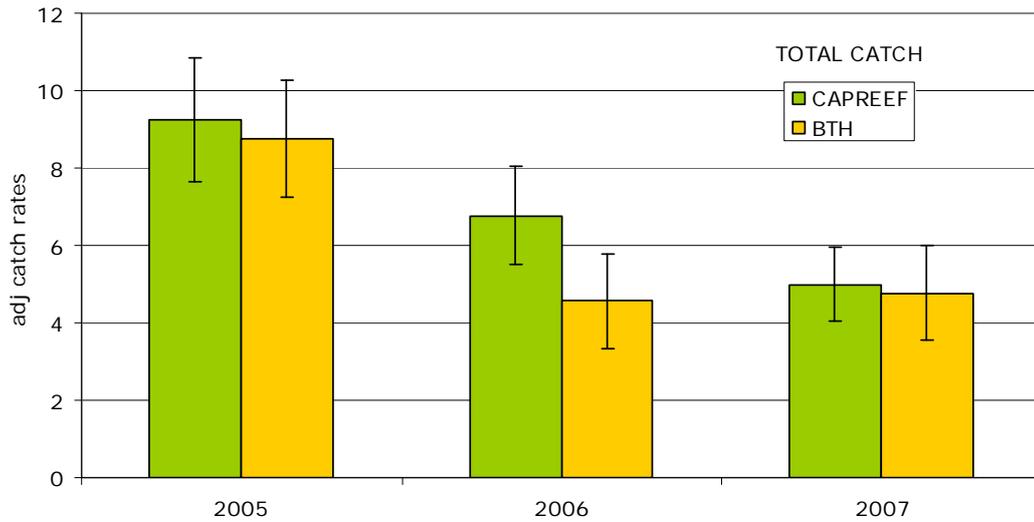


Figure 5: Comparison between total catch rates of BTH period and winter catch rates for CapReef surveys.

Another measure that may inform knowledge of the influence of the competition is the proportion of fish kept. It might be considered that in a competition based around weighing kept fish of certain species, the proportion of these fish kept (rather than released) would be higher. The proportion kept of species eligible for the competition was compared between the competition period and CapReef for the corresponding winter as shown in *figure 7*.

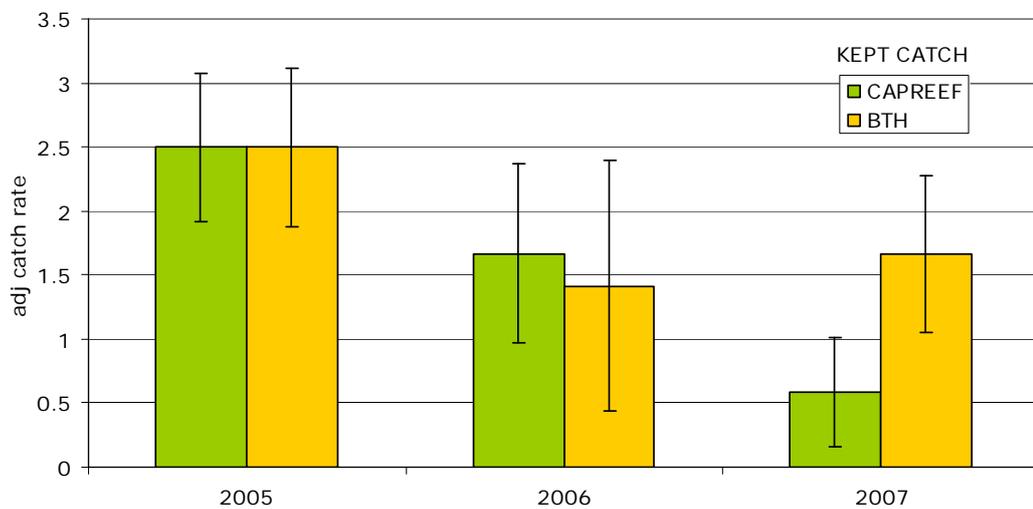


Figure 6: Comparison between kept catch rates of BTH period and winter catch rates for CapReef surveys

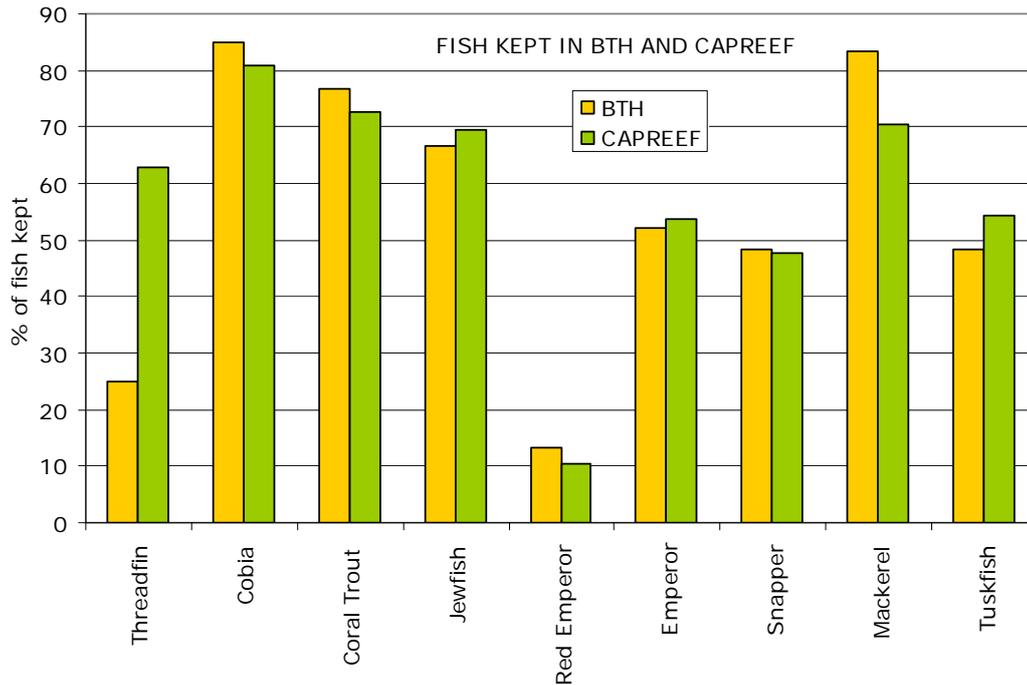


Figure 7: Comparison of the % of fish kept in the BTH period and winter CapReef surveys

These results show that for the species where sufficient data was available (with the exception of Threadfin and Mackerel); there was little if any difference in the proportion of fish kept within and outside of the competition. However for Threadfin a much higher proportion of fish were kept by the CapReef fishers than for the BTH competitors. There was also a slight increase in the proportion of Mackerel kept by BTH competitors.

These results do not give any clear indication that competitors fished any more successfully, or that they were more likely to keep competition species (with the possible exception of Mackerel). This seems consistent with fishers fishing as they would normally and hoping for a large catch.

## 6. Was there a change in the species mix of the catch?

If competitors were specifically targeting the species eligible for the competition it might be expected that these species would represent a higher proportion of the total catch during the competition. As a result the percentage fraction of the kept eligible species of the total kept catch was calculated for the BTH period and the winter CapReef catch rates. These are shown in *figure 8*.

This shows that there was a greater proportion of eligible species in the competition catch than in the winter CapReef catch. This may indicate that competitors may target the eligible species during the competition. However the previous section shows that they are no more likely to retain these species than CapReef fishers.

This seems consistent with fishers fishing as they would normally but in areas where the eligible species are found.

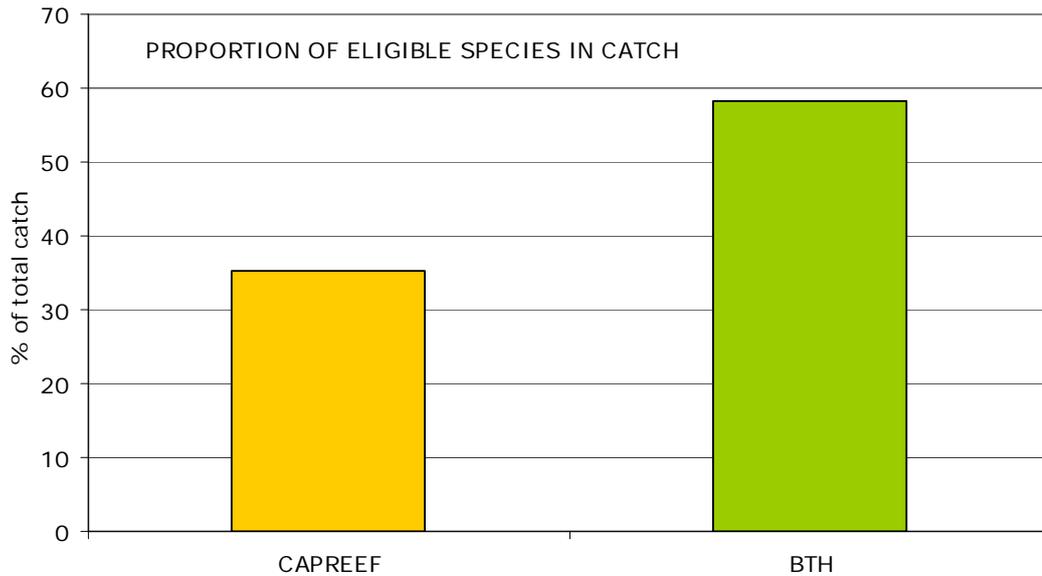


Figure 8: Comparison of the proportion of competition eligible species in the kept catch between winter CapReef and the BTH surveys

## 7. Does fishing effort change over the competition period?

A previous study of the factors effecting the number of fishing trips (Platten, Sawynok and Parsons 2007a) has shown that the two major factors influencing the number of trips are whether a particular day is a weekend day and the wind strength on the water (*see figure 9*).

This allows a comparison between the numbers of trailers present at the Auckland Street boat ramp during the competition with what would be expected to be there under similar wind conditions. The maximum numbers of trailers recorded under these wind conditions are also provided (*figure 10*).

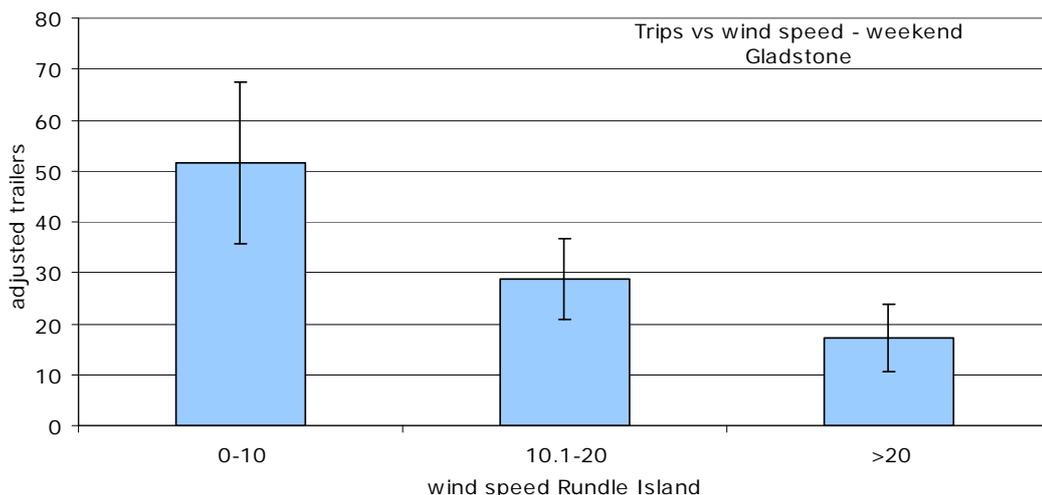


Figure 9: The average number of trailers adjusted to 9am for offshore wind strengths of 0-10, 10.1-20 and > 20 knots

It might be expected that the number of fishers would be greater during the competition period and the results show that more trailers were present than might be expected. However the numbers are (with one exception on a

very windy day) less than the maximum number recorded under these wind conditions on a weekend. This suggests that more people fish (on average) during the competition but that the numbers are within the range observed outside of the competition.

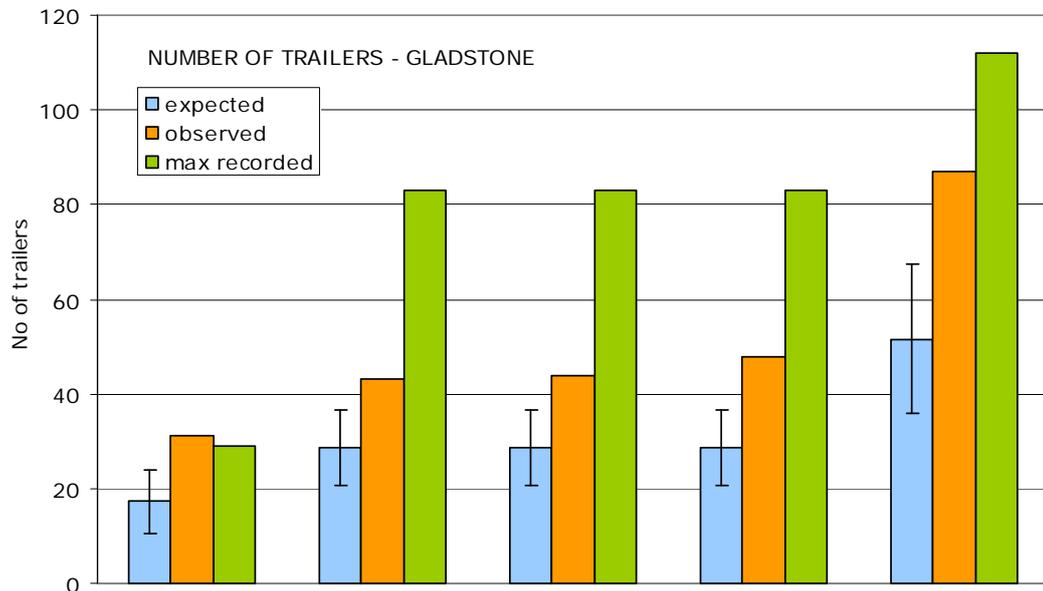


Figure 10: The expected number of trailers (based on *figure 8*), the observed number of trailers and the maximum number of trailers recorded under similar wind conditions for 5 BTH competition days

## 8. Does the competition result in more fish being caught?

The 2 major factors determining the total catch during the competition are the number of fishers and their catch rate (fish/person/trip).

The results suggest that more people fish during the competition than might be expected on a typical weekend; however the number is well within the maximum number that fish on some weekends. The catch rates of these fishers do not seem to be significantly higher than outside of the competition and they do not retain a greater proportion of their catch. This suggests that the total catch may be equivalent to or even less than a busy weekend at the boat ramp.

However it is likely that the competition fishers target the eligible species. This may cause a slightly higher number of these species to be caught over the competition than for a typical weekend. However based on the maximum number of fishers on weekends with similar weather, the take of these species is probably less than for weekends where a lot of fishers are on the water. This suggests that any increased take is probably small.

Another influence may be the targeting and take of large fish. At present CapReef has insufficient data to analyse any size differences between the competition period and for the corresponding CapReef period. This deserves further attention.

## 9. What types of fish have been weighed as part of the live catch competition?

The BTH has a very successful and popular live catch competition conducted with the assistance of the Gladstone Sportfishing Club. Fish are brought alive to a weigh station and then tagged, kept for a time in a holding tank and then released. This has resulted in a total of 2,321 fish being weighed, tagged and released in the Boyne River. The details of the numbers of fish tagged and recaptured for each year are shown in *figure 11*

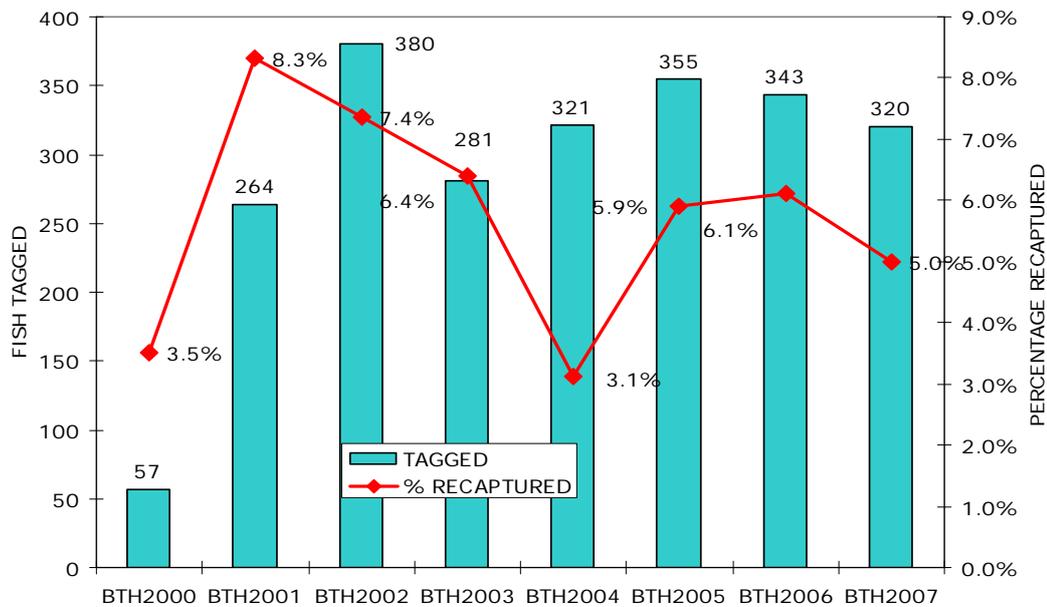


Figure 11: Summary of number of fish weighed live then tagged and released in BTH

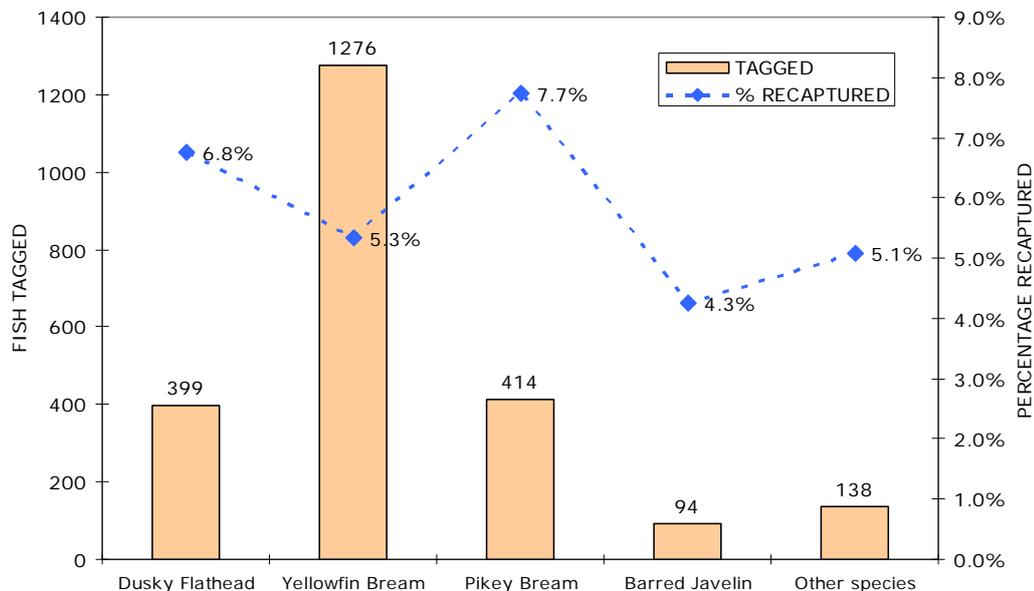


Figure 12: Summary of species tagged and recapture rates

The most popular fish have been Pikey and Yellowfin Bream (a combined total of 1,690 fish) with Dusky Flathead (399) and Barred Javelin (94). *Figure 12* provides a summary of the most popular fish live weighed along with the recapture rates for each species. A total of 138 (5.9%) of these

have been recaptured. This compares with the overall Suntag recapture rate of 7.7% (Sawynok 2007).

For Yellowfin Bream the BTH recapture rate is 5.3% compared with 4.3% for Suntag overall while for Pikey Bream the BTH rate is 7.7% compared with the Suntag rate of 4.8%. These recapture rates suggest that the handling and survival of fish released during the competition is comparable to the overall Suntag program.

## **10. Do fishers fish further offshore during the competition?**

One common perception of fishers is that larger fish may be found further offshore. This may result in competitors fishing further offshore during the competition. The patterns of fishing effort will give an indication of any changes in locations fished during the competition.

The locations reported by the fishers during the BTH competition were compared with those of the general CapReef surveys (exclusive of the BTH surveys) during the corresponding winter period offshore from Gladstone. Locations were classified using the CapReef regions defined in the report, "How much fishing effort is there?" (*figure 13*).

The percentage of trips that went further offshore varied through the years of the BTH surveys. In general the number of trips to inshore locations has increased and the number to offshore locations has decreased since 2005 (*figure 14*). This is in line with the findings of the CapReef effort report that showed a similar trend towards increased effort in inshore locations.

However *figure 14* also shows that inshore locations were fished more frequently in the CapReef surveys than in the BTH trips. In other words, a higher percentage of the trips were to the offshore reefs of the Capricorn Bunker Group during the BTH surveys than in the CapReef winter surveys.

These results are consistent with the view that the BTH competitors may fish further offshore than fishers normally do during winter. This may result in increased effort well offshore, but also is likely to reduce fishing effort in inshore locations below levels that would occur if the usual patterns of effort applied. That is, effort is spread over a wider area than would otherwise be expected.

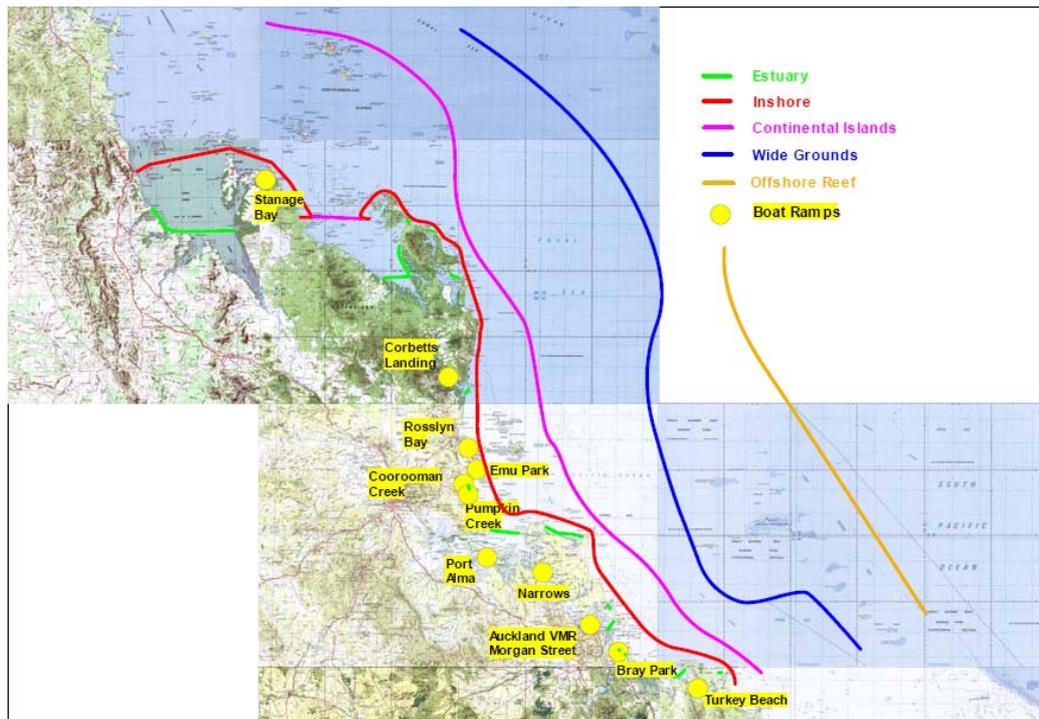


Figure 13: Offshore zones used to describe locations fishers

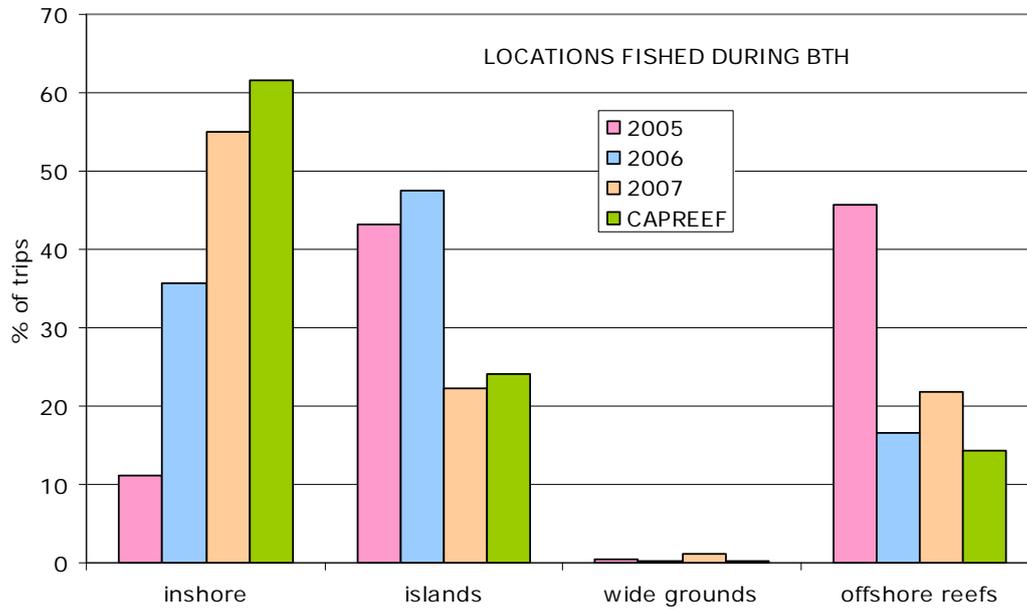


Figure 14: The destination of trips in the BTH surveys offshore from Gladstone compared with the winter surveys of CapReef in the Gladstone region

## 11. Where have tagged and released fish been recaptured?

Most fish moved less than 20km with 178 (96.7%) of the 184 recaptured being recaptured within that distance from the release site. The maximum distance moved was by a Dusky Flathead that moved 175km south to the Elliott River south of Bundaberg over 129 days (*figure 15*).

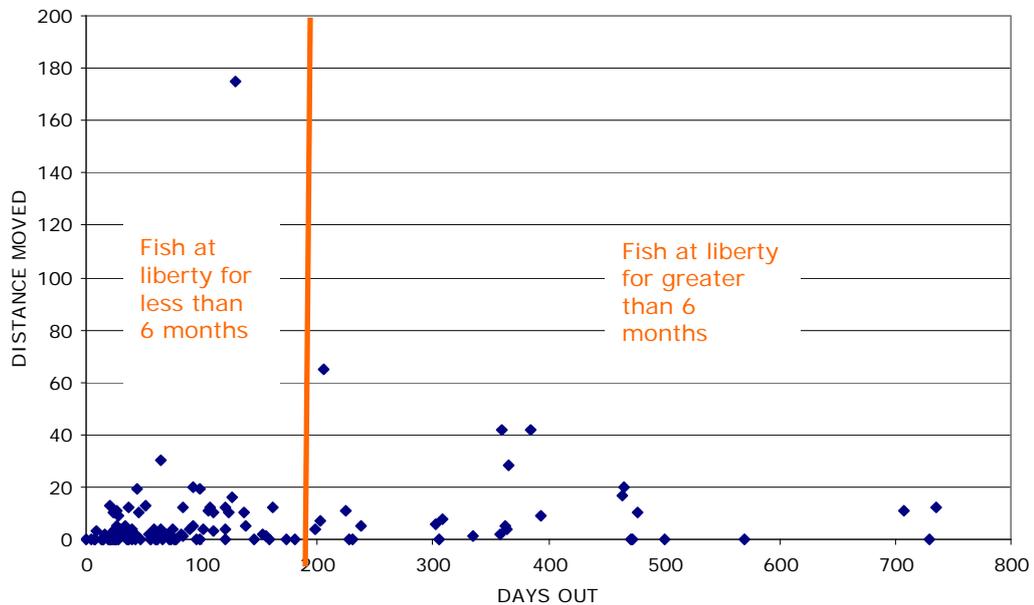


Figure 15: Distance fish moved from the release site compared with the time at liberty after release

Of the 24 fish (13.5%) that were recaptured after being at liberty for greater than 6 months 20 (83.3%) were also recaptured within 20km of the release site (*figure 16*). A Dusky Flathead released in 2000 was recaptured 206 days later 65km away to the southeast in Round Hill Creek.

*Figure 16* shows the locations of fish recaptured within 20km of the release site while *figure 17* shows the locations of fish recaptured greater than 20km from the release site.

The longest time for a fish to be recaptured after release was 735 days (just over 2 years) for a Rock Flathead released in 2003. This fish was recaptured 12km away from the release site in South Trees Inlet.

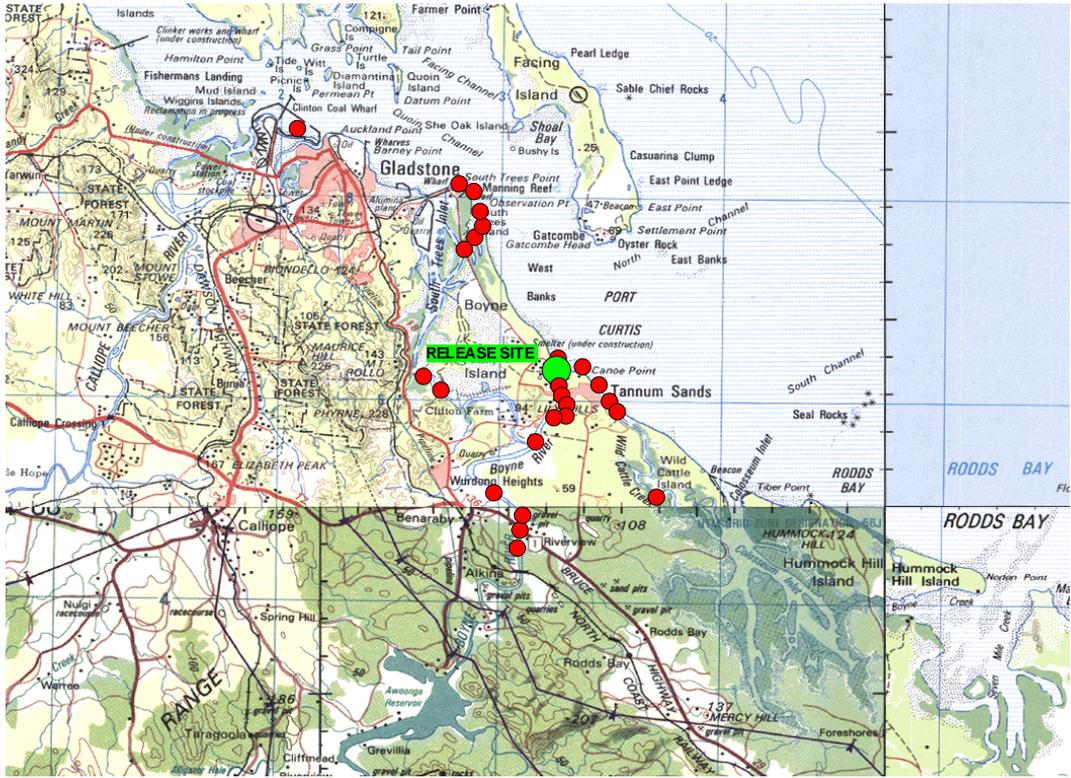


Figure 16: Locations where fish recaptured within 20km of release site

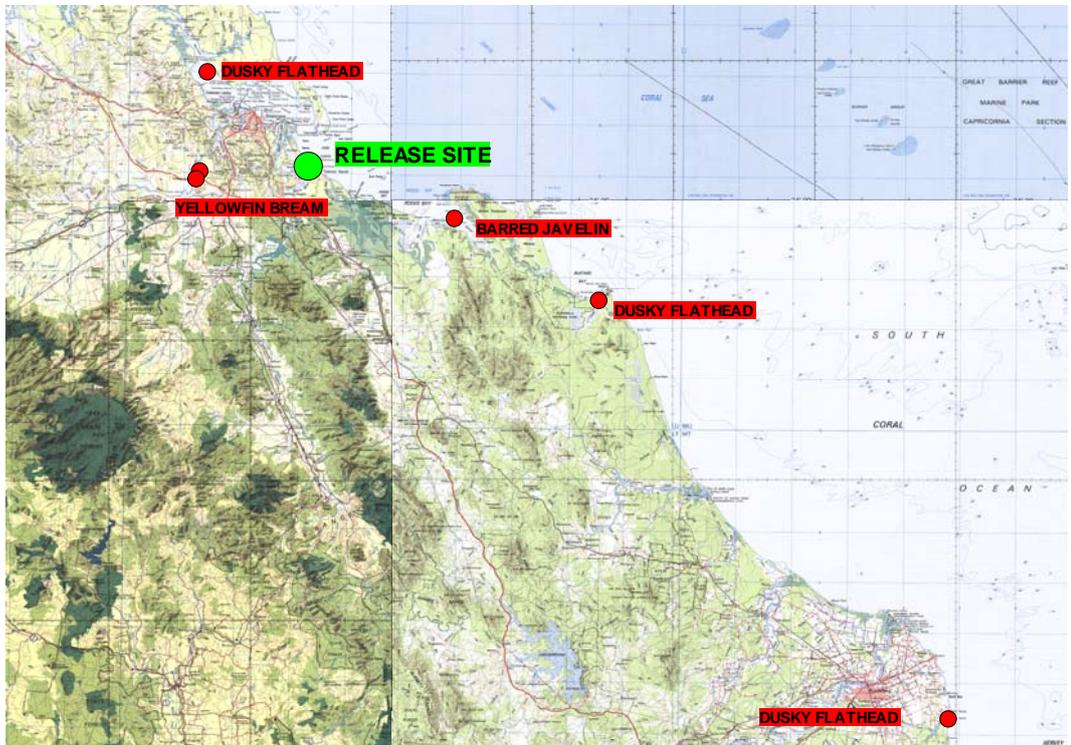


Figure 17: Locations where fish recaptured greater than 20km from release site

## 6. References

- Platten J, Sawynok W and Parsons W (2007a): How much Fishing Effort is there? Patterns of fishing effort of recreational fishers offshore from Central Queensland: CapReef report STCR-2007-15: At [www.info-fish.net](http://www.info-fish.net)
- Platten J, Sawynok W and Parsons W (2007b): What is the catch? The catch of recreational fishers offshore from Central Queensland: CapReef report STCR-2007-14: At [www.info-fish.net](http://www.info-fish.net)
- Sawynok W (2007): Austag Research Report 2005/06: At [www.info-fish.net](http://www.info-fish.net)
- Sawynok W and Platten J (2007): Boyne Tannum Hookup Live Fish Release Report 3: At [www.info-fish.net](http://www.info-fish.net)
- Yearsley GK, Last PR and Hoese DF (2006): Standard Names of Australian Fishes: CSIRO Marine and Atmospheric Research Paper 009: Species list at [www.fishnames.com.au](http://www.fishnames.com.au)

7. Appendix

CAPREEF FISHING TRIP				
				
TRIP DETAILS				
TRIP NO:	CRRBXXXX			
DATE	27/1/2007			
SKIPPER				
NUMBER OF FISHERS	2			
BOAT RAMP	ROSSLYN BAY			
HOME TOWN	EMU PARK			
FISHING EFFORT DETAILS				
TIME LEFT BOAT RAMP	4.30 AM			
TIME RETURNED BOAT RAMP	12.00 NOON			
LOCATION FISHED (1)	FINDLAY REEF			
LOCATION FISHED (2)				
LOCATION FISHED (3)				
CATCH DETAILS				
SPECIES	KEPT	KEPT LENGTH	RELEASED	RELEASED LENGTH
BARCHEEK CORAL TROUT	1	480	1	
COMMON CORAL TROUT				
GRASS EMPEROR (SWEETLIP)				
REDTHROAT EMPEROR (SWEETLIP)				
SPANGLED EMPEROR				
LARGEMOUTH NANNYGAI (RED JEW)				
SMALLMOUTH NANNYGAI (RED JEW)				
RED EMPEROR				
STRIPEY SNAPPER (RAILWAY PERCH)	1	410		
HUSSAR				
VENUS TUSKFISH (PARROT)				
BLACKSPOT TUSKFISH (BLUETOOTH)				
SPANISH MACKEREL				
SCHOOL MACKEREL (DOGGIE)				
SPOTTED MACKEREL				
GREY MACKEREL				
WIRENETTING COD (MATTY COD)			14	
GOLDSPOTTED ROCKCOD (ESTUARY COD)	2	1040/420		
SLATEY BLUBBERLIP (BLACKALL/MOKE)				
IODINE BREAM (BALDY BREAM)				
SNAPPER (SQUIRE)				
SHARK			7	
BARRED JAVELIN (GRUNTER)				
GOLDEN SNAPPER (FINGERMARK)				
COBIA (BLACK KINGFISH)				
YELLOWFIN BREAM				
PIKEY BREAM				
DUSKY FLATHEAD				
SAND WHITING				
BARRAMUNDI				
MANUALLY RECORD ALL OTHER SPECIES KEPT/RELEASED				
LEAPING BONITO	1			
RETURN FORM TO CAPREEF: EMAIL TO <a href="mailto:infofish@zbcorn.net">infofish@zbcorn.net</a> OR FAX TO: 07-4926-335 OR MAIL TO: PO Box 9793 FRENCHVILLE 4701				

Figure 18: Sample CapReef trip sheet used to collect data on fishing trips during the BTH