

A person's hands are shown holding a snapper fish against a background of a large body of water and a forested shoreline. The fish is silver with a prominent dorsal fin. The person is wearing a blue long-sleeved shirt and white socks with pink stripes.

**MONITORING SNAPPER
IN**

A sunset scene over a body of water. The sun is low on the horizon, casting a golden glow across the sky and reflecting on the water. A lighthouse structure is visible in the foreground on the left side.

**SOUTH EAST
QUEENSLAND**

MONITORING SNAPPER IN SE QUEENSLAND 1985-2013

Report

This report has been prepared by Infofish Australia for Australian National Sportfishing Association Qld (ANSAQ) and Moretag.
December 2013

Scope

The report provides:

- ✦ A summary of tagging and recaptures of Snapper in SE Queensland (SEQ) from Sunshine Coast to NSW border
- ✦ Size of Snapper tagged, CPUE proxy and growth
- ✦ Locations where Snapper tagged
- ✦ Movement of Snapper
- ✦ Movement of Snapper in and out of Moreton Bay

Data source

Tagging and recapture records from 1985-2013 contained in the Suntag database at <http://qld.info-fish/Infofish>. Access to database is limited to authorised users.

Area being monitored

The area being monitored is from Maroochydore on the Sunshine Coast to the NSW border as shown in *figure 1*. Locations where fish were tagging and recaptured are shown using grids on Suntag grid maps:

- ✦ Caloundra Wide CAW
- ✦ Moreton Bay (north) MB01
- ✦ Moreton Bay (central) MB02
- ✦ Moreton Bay (south) MB03
- ✦ Moreton Offshore MOF
- ✦ Gold Coast Coomera GC22
- ✦ Gold Coast Nerang GC23
- ✦ Tweed River TWR
- ✦ Gold Coast Offshore GCO

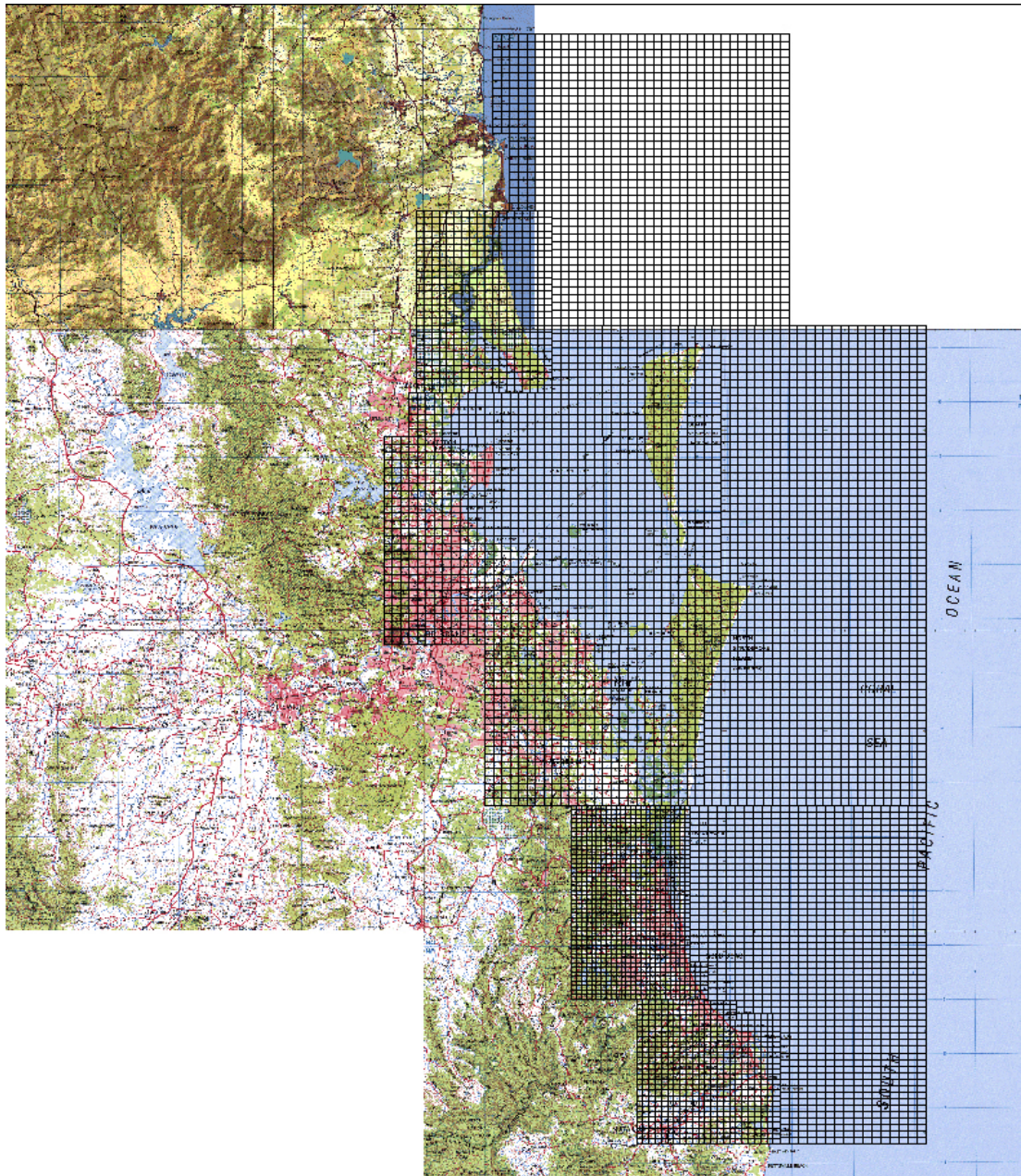


Figure 1: Area of SEQ being monitored

Snapper tagged and recaptured

From 1985-2013 there have been 12,477 Snapper tagged and 706 recaptures (5.7%) in SE Queensland (SEQ). *Figure 2* shows the number of fish tagged and recaptured in each 5 years from 1985-2013. Data for 2010-13 only covers 3.5 years.

Recapture rates were highest in 1990-1995 at 10.2% and have steadily declined since then to 2.0% in 2010-2013. Of the fish recaptured 25 were recaptured twice and 2 recaptured 3 times.

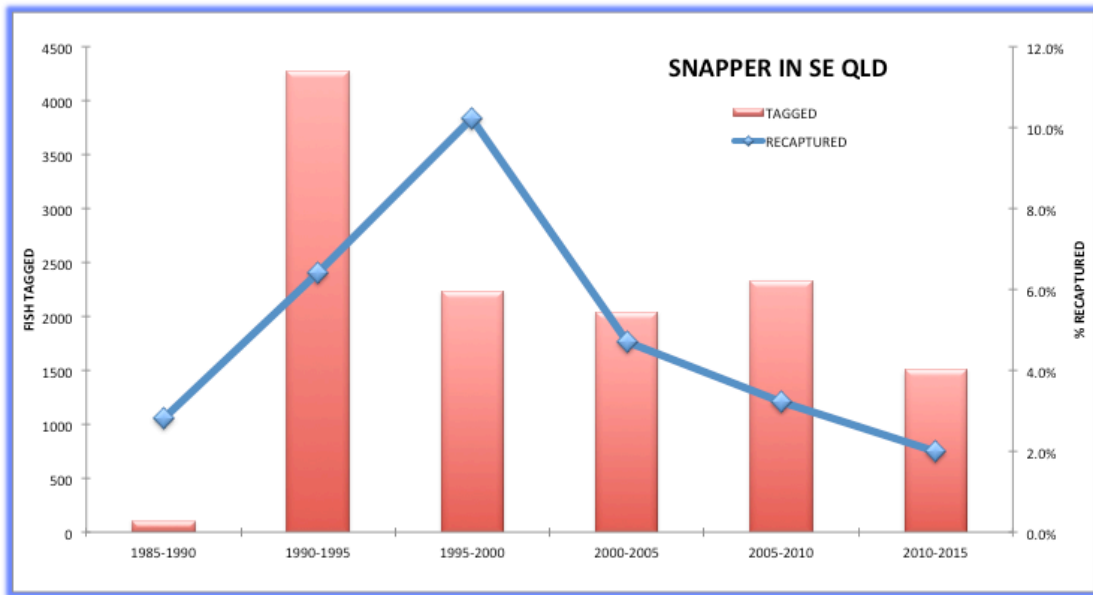


Figure 2: Number of Snapper tagged and recaptured each 5 years from 1985-2013

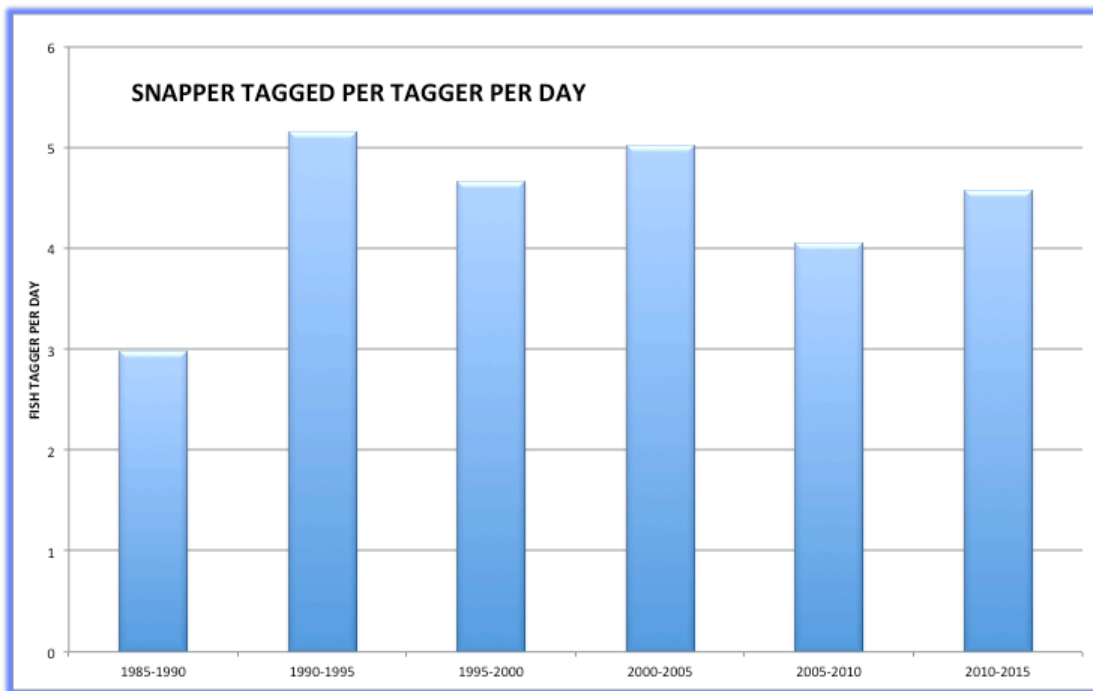


Figure 3: Number of Snapper tagged by taggers each day each 5 years from 1985-2013

Figure 3 shows the number of Snapper tagged by each tagger each day for each 5 years from 1985-2013. This can be viewed as a CPUE proxy over that time. Excluding 1985-1990 when few fish were tagged the number of fish tagged per tagger per day ranged from a high of 5.2 in 1990-1995 to a low of 4.1 in 2005-2010.

Snapper Sizes

Of the Snapper tagged 12,448 (99.8%) were measured. The number of Snapper tagged in each size range is shown in *figure 4*. Of the fish tagged most (90.4%) were in the size range 200:349mm while 5.4% of fish tagged were over 350mm.

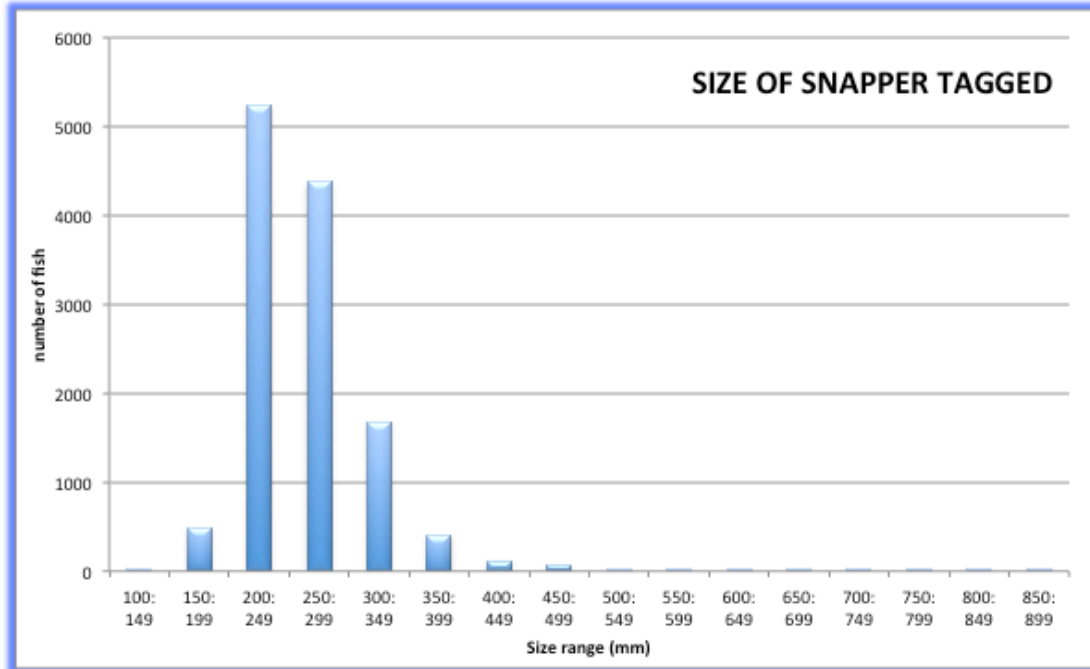


Figure 3: Locations where Snapper were tagged in SEQ 1985-2013

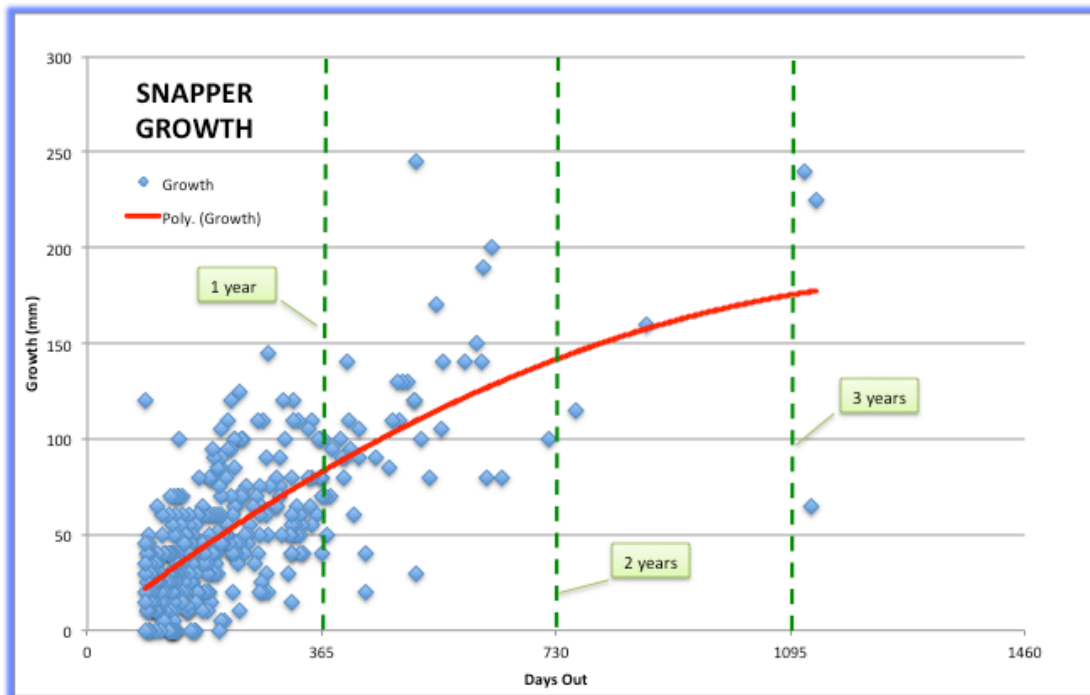


Figure 4: Growth of Snapper in SEQ

Snapper growth

Of the recaptures 344 were at liberty for over 90 days and showed positive growth. *Figure 4* shows the growth of Snapper compared with the days out in SEQ and the projected growth after 1, 2, and 3 years. As 76.9% of fish tagged were in the size range 200:299mm this growth can be considered indicative of fish in that size range. The projected growth of these fish is approximately 80mm at the end of the first year, 140mm by the end of the second year and 175mm by the end of the third year.

Tag Locations

In SEQ there were 341 grids where Snapper were tagged from 1985-2013 with 28 grids where over 100 fish were tagged (shown in red in figure 5). The largest number of fish tagged was in grid MB02/T17 at Green Island where 1,669 were tagged. Locations where fish were tagged can be viewed interactively using Google Earth.¹ Grids show the number and size of fish tagged in each grid.

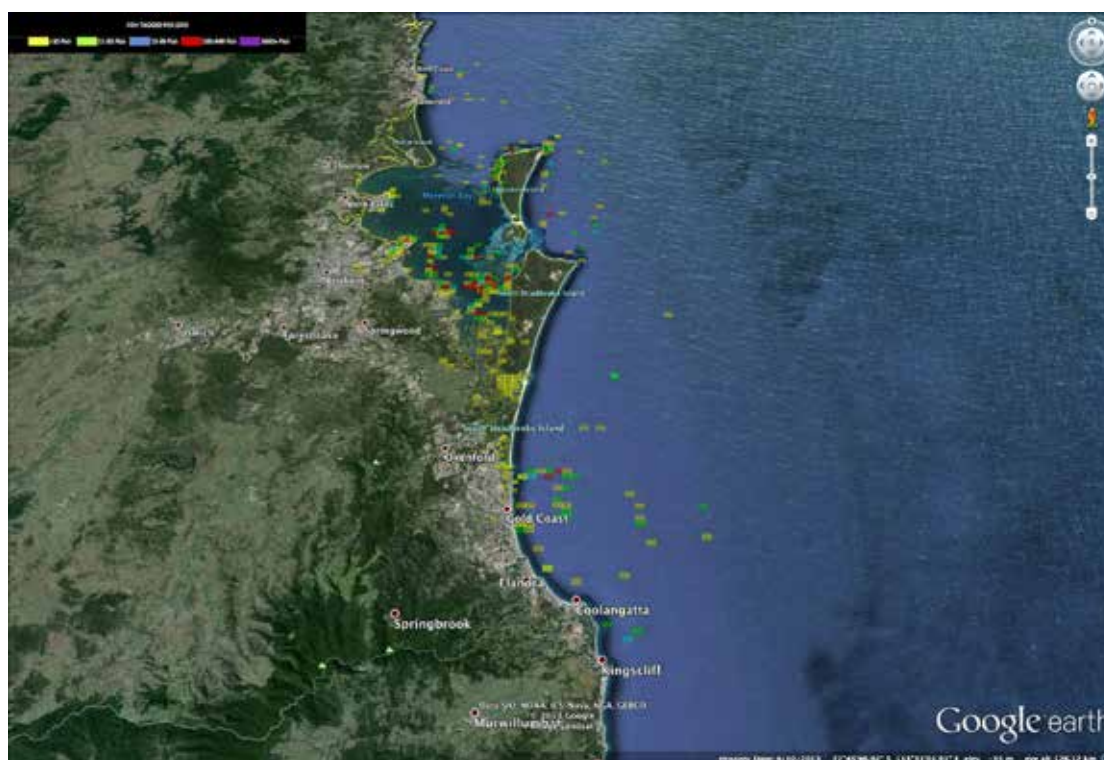


Figure 4: Number of Snapper tagged in each size range from 1985-2013

¹ Google Earth views of locations where Snapper tagged are available from the Suntag website www.info-fish.net/suntag

Snapper movement

Of the 12,477 Snapper tagged in SEQ there were 731 total recaptures including fish recaptured more than once. A total of 714 recaptures had sufficient information to determine movement between tagging and recapture. *Figure 5* shows the distance fish were recaptured from where tagged compared with the number of days between tagging and recapture.

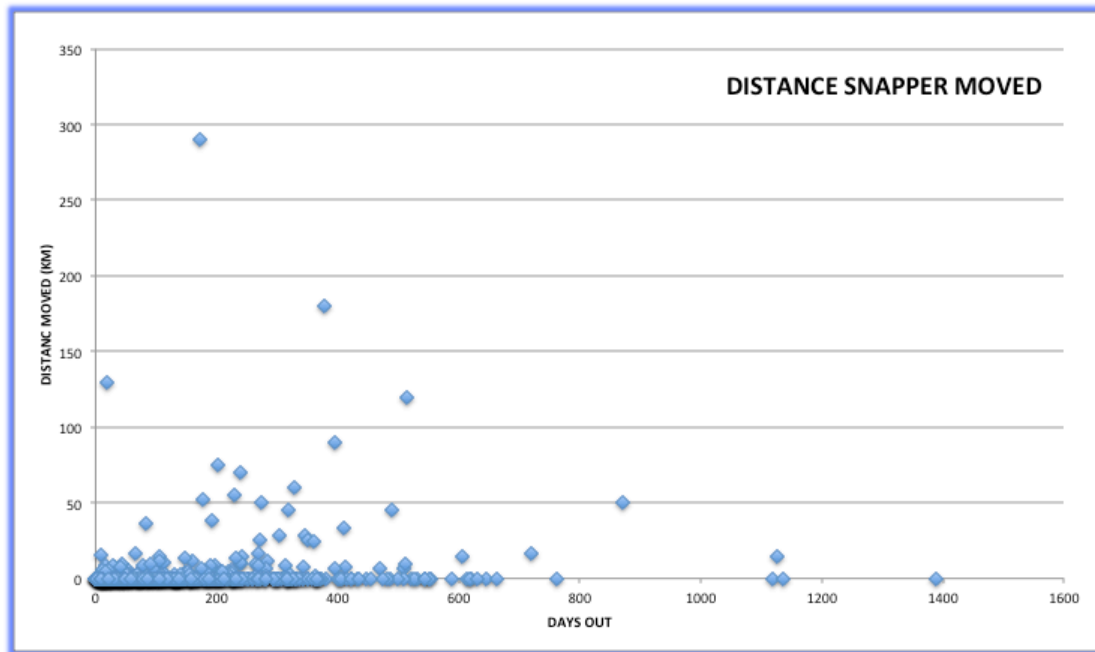


Figure 5: Distance Snapper moved in SEQ compared with days out

Snapper Movement to and from Moreton Bay

From 1985-2013 there were 14 fish tagged in Moreton Bay that were recaptured outside the bay as shown in *figure 6*. Of those 12 moved to the north while 2 moved south. The furthest distance moved was a fish tagged at Green Island and recaptured on the inside of Fraser Island having moved 290km. All other movements were less than 150km.

Figure 7 shows fish that were tagged outside Moreton Bay and recaptured in the bay. Both fish were tagged offshore from the Gold Coast.

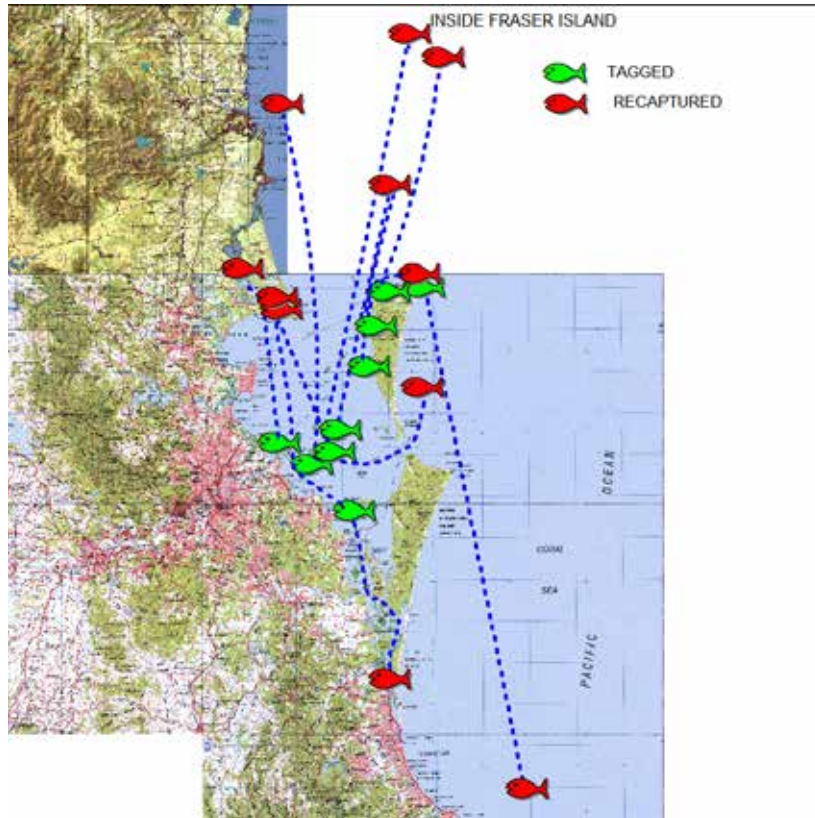


Figure 6: Snapper tagged in Moreton Bay and recaptured outside the Bay

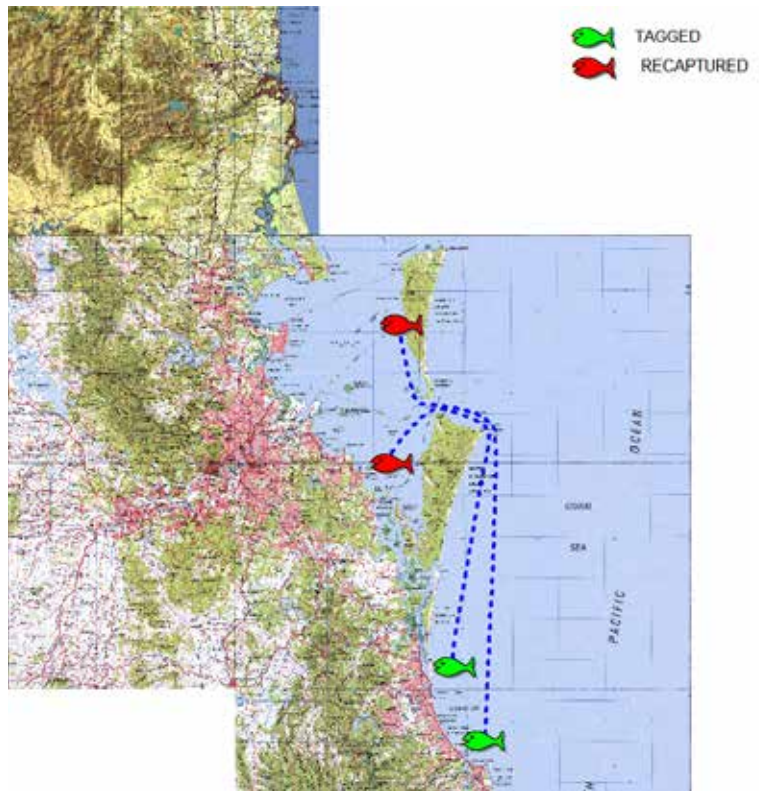


Figure 7: Recaptures of Snapper in Moreton Bay that were tagged outside the bay