

**BARRAMUNDI
IN
HERBERT CREEK**



BARRAMUNDI IN HERBERT CREEK

REPORT

This report has been prepared by Infofish Australia for Captag July 2014.

SCOPE

This report examines data available for Barramundi in Herbert Creek and Stange Bay area:

- ✦ Tagging and recaptures of Barramundi 2007-2014
- ✦ Commercial catch data of Barramundi 1990-2014

DATA SOURCE

- ✦ Barramundi tagging and recapture records from the Suntag database at <http://qld.info-fish.net>. Access to the database is limited to authorised users.
- ✦ Commercial catch data obtained from <http://qfish.daff.qld.gov.au>.
- ✦ Rainfall data from Bureau of Meteorology <http://www.bom.gov.au/> station 033195 at Williamson 22.47S 150.18E

AREA MONITORED

Locations in the Herbert Creek area where fish were tagging and recaptured are shown using grids on Suntag grid maps and commercial catch data are based on QFISH map (*figure 1*):

- ✦ Broadsound BSD
- ✦ Herbert Creek HCK
- ✦ Shoalwater Bay SWB (part)
- ✦ QFISH grids P27, P28, Q28

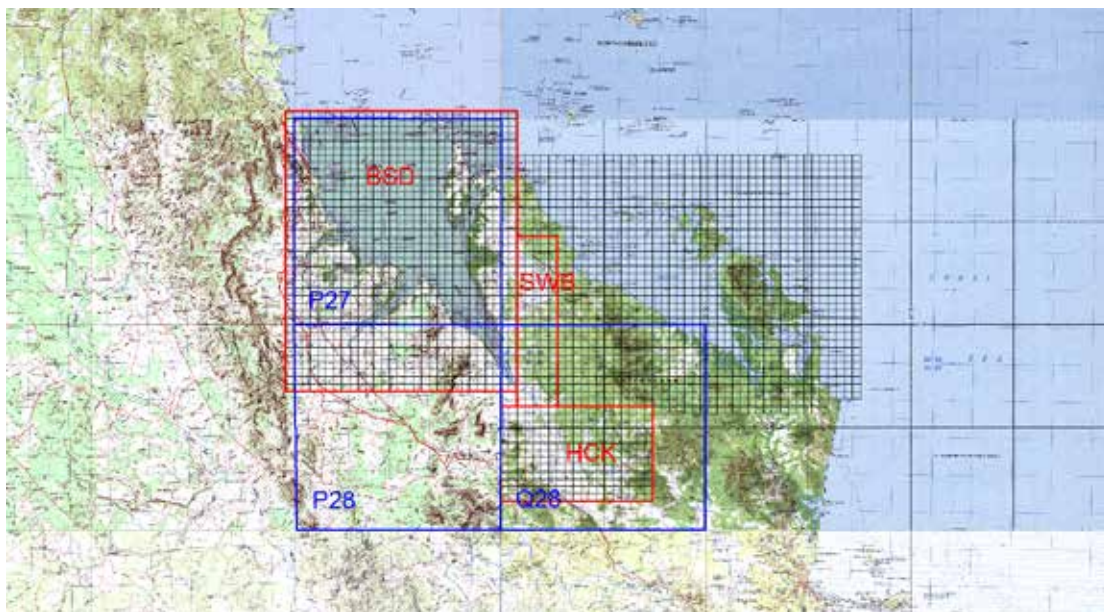


Figure 1: Suntag grid maps Herbert Creek and Stange Bay area

SOME OBSERVATIONS

Based on the data collected in the Herbert Creek area the following observations are made:

- ✦ There were 3,144 Barramundi tagged from 2007-2014 with 129 (4.1%) fish recaptured once.
- ✦ There were 2,203 fish tagged in 2010 with 1,668 (75.7%) being year 0 recruits.
- ✦ Years 2009, 2010, 2011 and 2013 were years of good recruitment with 2010 being an exceptional year.
- ✦ There were 97 grids where fish were tagged with the largest number 1,142 (36.3%) tagged in Halfway Creek SWB/D31.
- ✦ There were insufficient data to provide anything more that indicative growth.
- ✦ Most fish (94.4%) were recapture within the Herbert Creek area however there were 8 fish recaptured outside the area as far north as the Proserpine River (330km) and as far south as the Boyne River (380km).
- ✦ The commercial catch has ranged from a low of 3.44t in 1996 to a high of 36.6t in 2003.
- ✦ The commercial catch rate has fluctuated from a low of 27.5kg/day in 2000 to a high of 78.6kg/day in 2012.

FISH TAGGED AND RECAPTURED

From 2007-Jun 2014 there were 3,144 Barramundi tagged and a further 65 measured in the Herbert Creek area. Of the fish tagged there were 129 (4.1%) recaptures with 12 recaptured twice and 1 a third time.

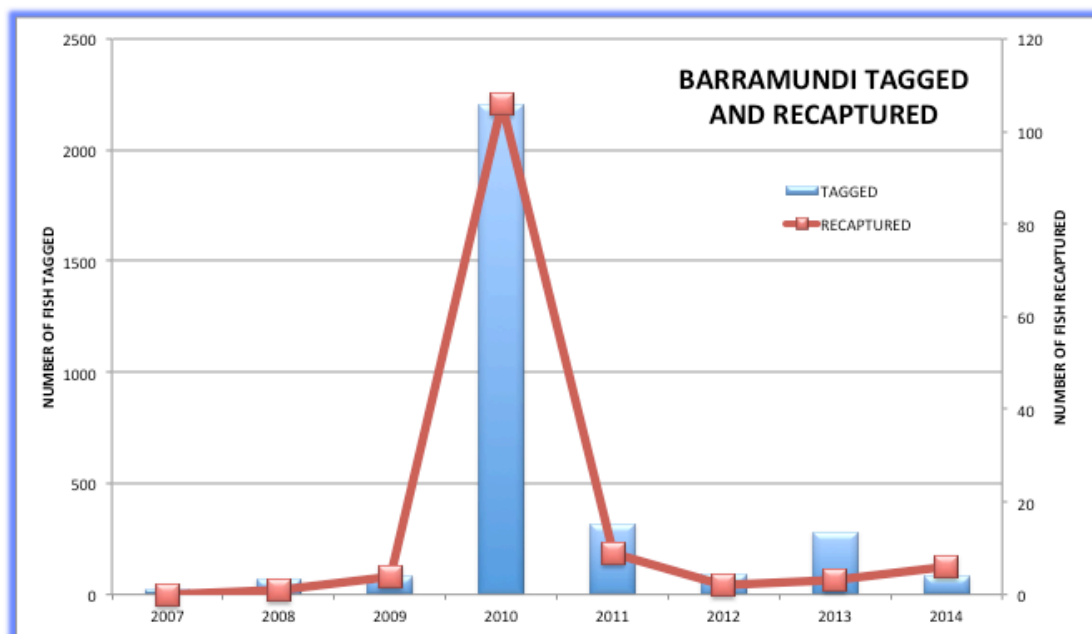


Figure 2: Number of Barramundi tagged and recaptured each year 2007-2014

Figure 2 shows the numbers tagged and recaptured each year from 2007-2014. This shows that a large number of fish were tagged in 2010. Of the 2,203 fish tagged 1,668 (75.7%) were year 0 recruits being under 300mm showing that year as a very strong recruitment year.

Figure 3 shows the size of fish recorded on a timeline from 2007-2014 and rainfall at Williamson. This shows recruitment of fish after years of significant rainfall and the growth of those fish over time. This indicates that 2009, 2010, 2011 and 2013 were years of good recruitment with 2010 being an exceptional year. Figure 4 shows where the fish were tagged. There were 97 grids where fish were tagged with the largest number 1,142 (36.3%) being tagged in Halfway Creek SWB/D31.

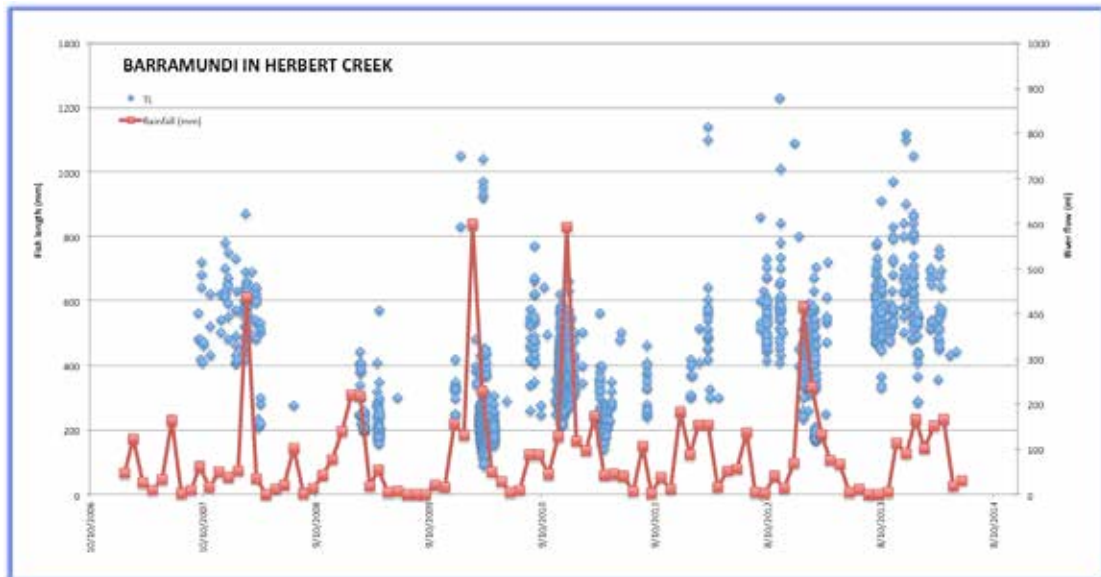


Figure 3: Timeline of Barramundi sizes from 2007-2014

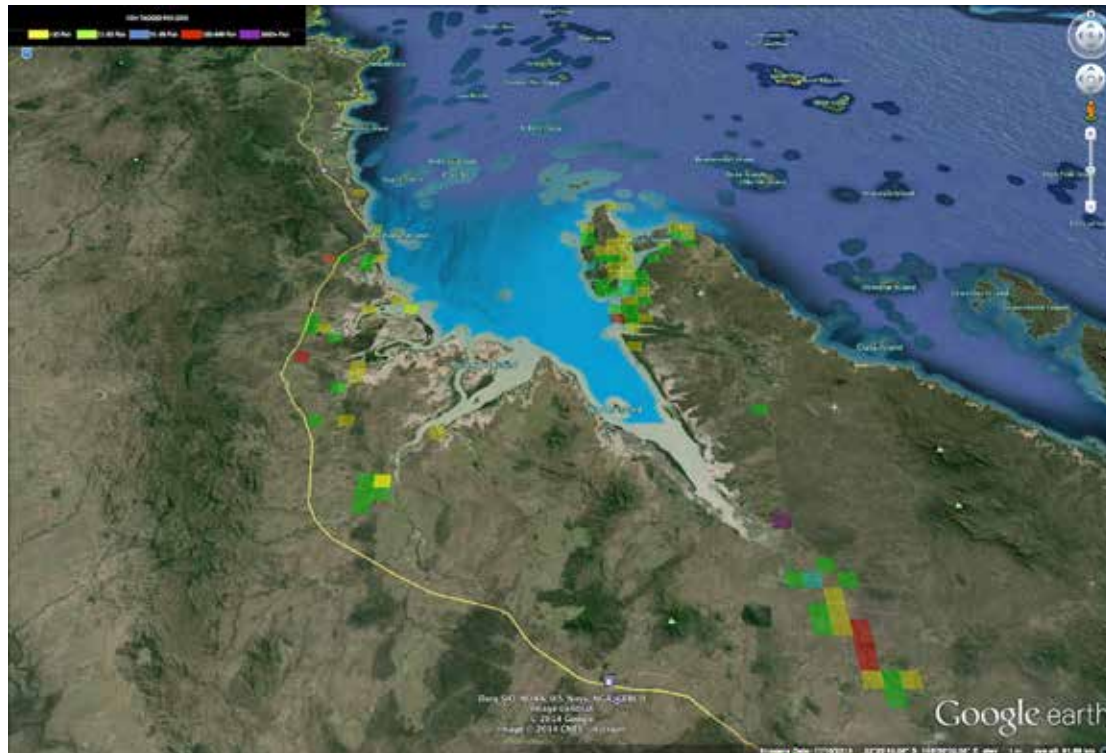


Figure 4: Grids where Barramundi were tagged 2007-2014

GROWTH AND MOVEMENT

There were 30 recaptures where the fish were out for 90 days or more and had positive growth. *Figure 5* shows the growth of fish over time. There are insufficient data to provide anything more than indicative growth.

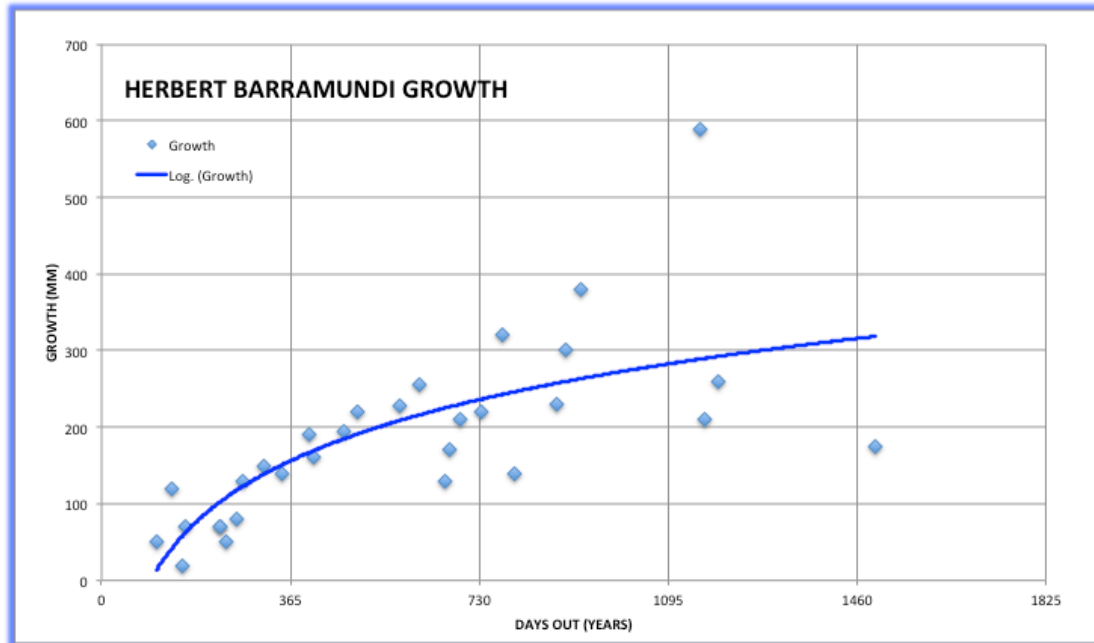


Figure 5: Growth of Barramundi over time

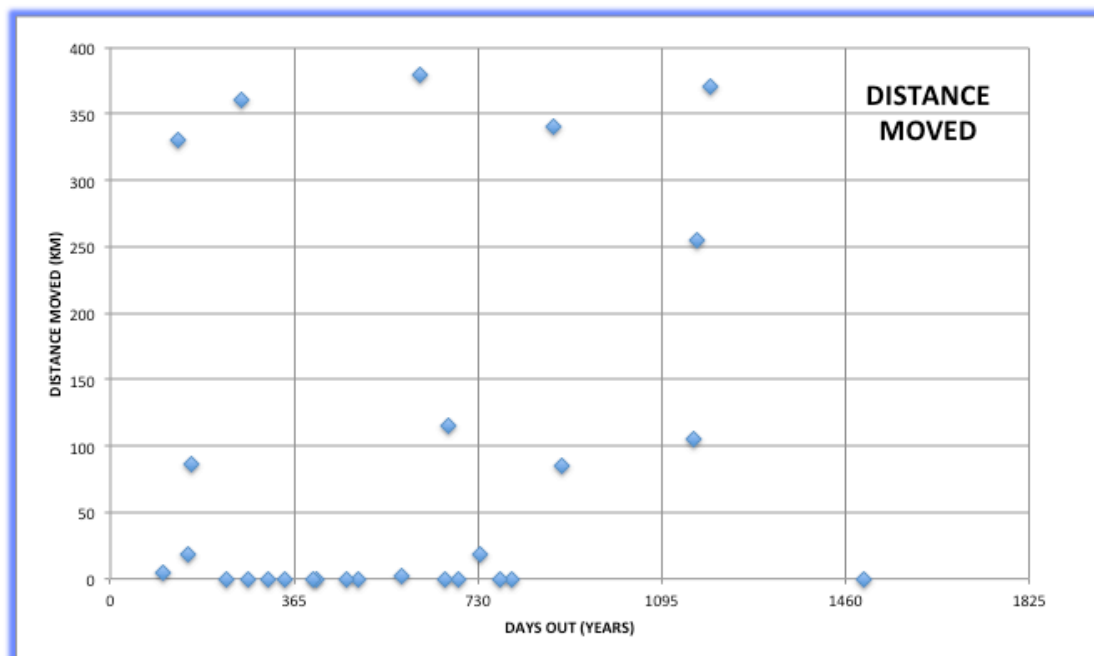


Figure 6: Movement of Barramundi tagged in the Herbert Creek area

There were 30 recaptures where fish were at liberty for over 35 days where the movement of fish was calculated. *Figure 6* shows distance moved compared with the days between tagging and recapture. Of the 142 recaptures 134 (94.4%) were recaptured in the creek or Thirsty Sound and 106 were recaptured in the same area as tagged within 35 days of being tagged.

There were 8 fish tagged in the creek that were recaptured outside the area. One fish was recaptured 330km to the north in the Proserpine River and another was recaptured 380km to the south in the Boyne River. *Figure 7* shows the movement of fish outside of the Herbert Creek area.

There was 1 fish tagged outside the area in McCready Creek at Mackay that was recaptured in the Styx River 195km to the south.

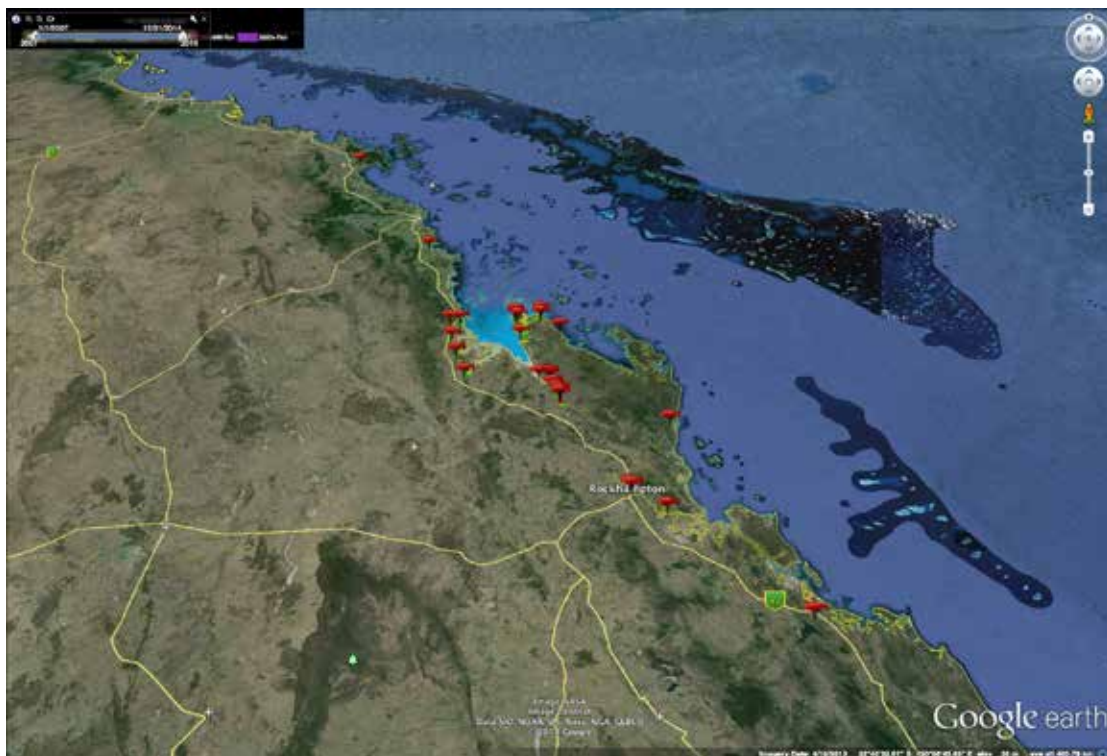


Figure 7: Movement of fish outside of Herbert Creek area and fish tagged elsewhere and recaptured in the Herbert Creek area

COMMERCIAL CATCH

Figure 8 shows the commercial catch and catch rate for Barramundi from 1990-2014 (data for 2014 incomplete). Catches ranged from a low of 3.44t in 1996 to a high of 36.6t in 2003.

The commercial catch rate has fluctuated from a low of 27.5kg/day in 2000 to a high of 78.6kg/day in 2012. Catch rate steadily declined from 62.3 to 27.5kg/day from 1992-2000. The catch rate rose significantly in 2001 to 58.7kg/day and has remained high since then.

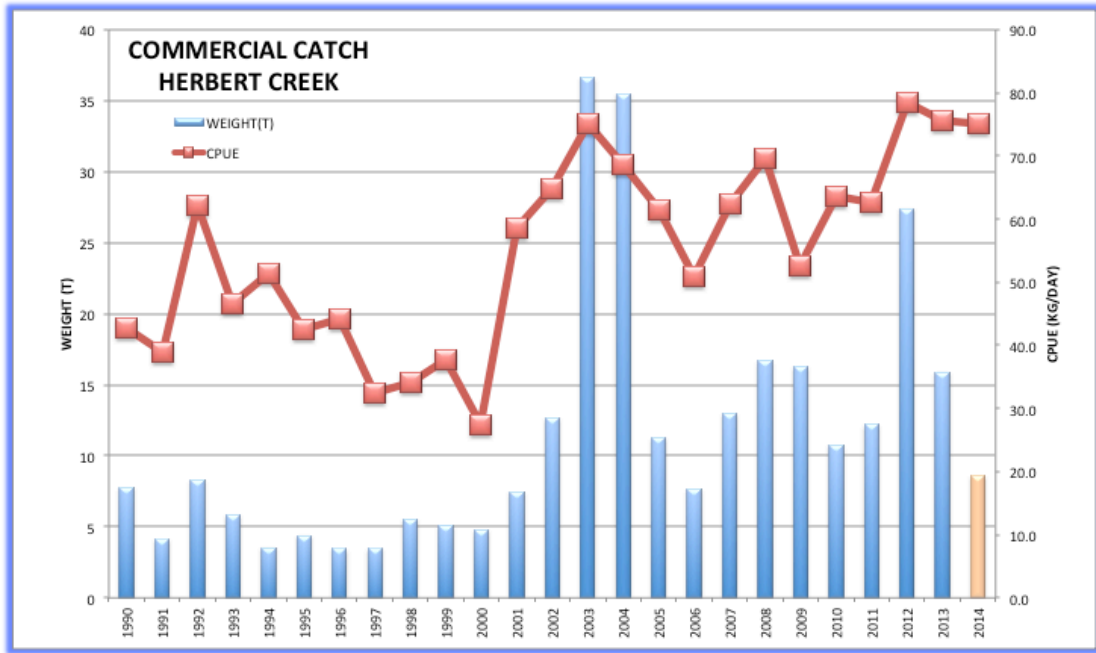


Figure 8: Commercial catch and CPUE in Herbert Creek 1990-2014