



## GLADSTONE BARRAMUNDI 2017

### **Season 2017 forecasts versus actual – mid-season June 2017 review**

There were 11 forecasts made for Barramundi in size of fish, catch rates, trends in stocks, recruitment and commercial catch. Taggers catch rates do not reflect the catch rates of the total fishing population however as taggers are generally in the top 20% of fishers that catch most fish their catches are more sensitive to changes in fish stocks and are comparable from year to year. Forecasts are available at [www.crystal-bowl.com.au](http://www.crystal-bowl.com.au).

#### **Taggers**

- ✦ Of the 11 forecasts for taggers 4 (36%) were within the forecast range or with 10% of the forecast range
- ✦ Forecast for size range of fish were affected by fish spilling from Lake Awoonga in Apr 2017 however there is no change proposed to the forecast
- ✦ Catch rates were on track as forecast until the spilling of fish from Awoonga and forecasts have been revised to take account of this influx of fish
- ✦ Forecast was for poor/moderate recruitment and is currently assessed as poor while recruitment in the adjacent Fitzroy River is assessed as strong in line with environmental conditions
- ✦ The trend in stock levels was downward until fish spilled from Awoonga however it has not been possible to assess the overall effect on stocks

#### **Commercials**

- ✦ For the commercial catch the data are only available for 2016 while data for 2017 is incomplete
- ✦ There were no forecasts made for commercial catch in 2017 due to the uncertainty in effort shift results from the introduction of the Capricornia Net Free Zone
- ✦ Commercial effort increased by 51% in 2016 compared with 2015
- ✦ The increase in commercial effort is likely to reflect some of the effort displaced from the Capricornia Bay Net Free Zone

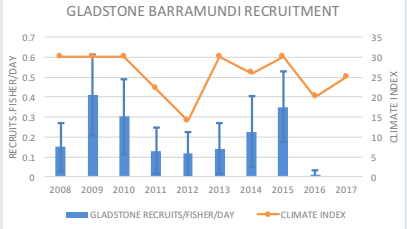
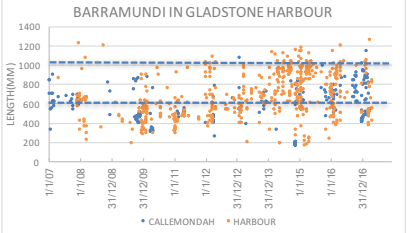
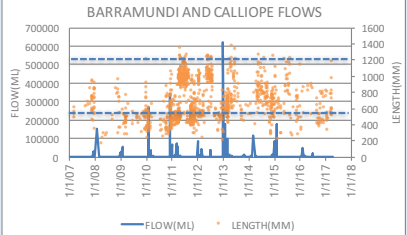
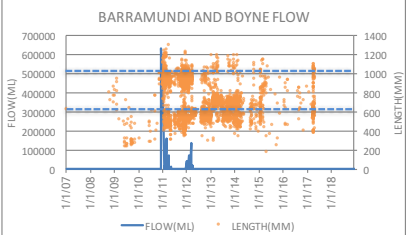
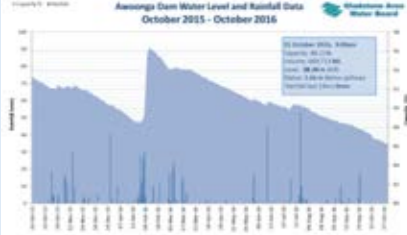
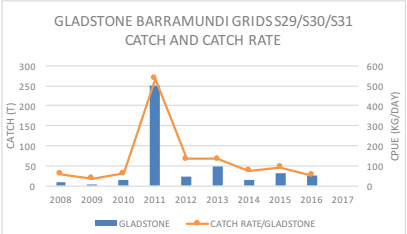
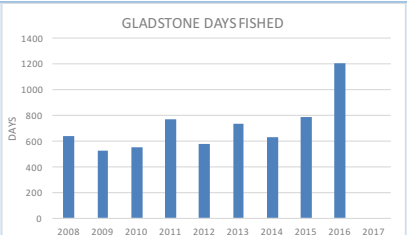
#### **Environmental conditions**

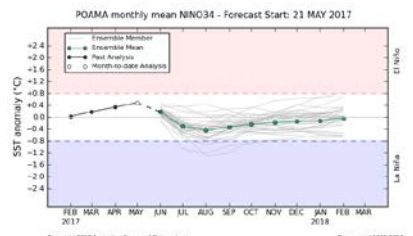

- ✦ Dry conditions largely persisted through to Apr 2017 when the remnants of Cyclone Debbie brought flooding to much of coastal Central Queensland
- ✦ Climate outlook is for neutral conditions through to Feb 2018
- ✦ Rainfall forecasts are only available for 3 months and the forecast is for a 45-55% chance of exceeding median rainfall from Jun-Aug

Infofish Australia

June 2017

MEASURE	FORECAST	ACTUAL	GRAPH																																												
<b>FITZROY</b>	<b>2017</b>	<b>June 2016</b>																																													
Trophy fish >1m Legal - trophy fish 580-999mm Undersize fish 200-579mm	5% (0-15%) 70% (65-85%)  25% (15-35%)	9.6% 51.1%  39.3%	<p>GLADSTONE BARRAMUNDI SIZES 2017</p> <table border="1"> <caption>GLADSTONE BARRAMUNDI SIZES 2017 Data</caption> <thead> <tr> <th>Category</th> <th>Forecast (%)</th> <th>Taggers (%)</th> </tr> </thead> <tbody> <tr> <td>Undersized (200-579mm)</td> <td>~25</td> <td>~40</td> </tr> <tr> <td>Legal (580-999mm)</td> <td>~70</td> <td>~50</td> </tr> <tr> <td>Trophy (1000+mm)</td> <td>~5</td> <td>~10</td> </tr> </tbody> </table>	Category	Forecast (%)	Taggers (%)	Undersized (200-579mm)	~25	~40	Legal (580-999mm)	~70	~50	Trophy (1000+mm)	~5	~10																																
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Actual catch rates taggers Fish/tagger/day <b>Revised</b>	Overall 1.1 (0.9-1.3) <b>2.0 (1.8-2.2)</b> Legal fish 0.8 (0.6-1.0) <b>1.5 (1.3-1.7)</b>	Overall 2.2  Legal fish 1.6	<p>GLADSTONE BARRAMUNDI CATCH RATE FORECAST AND ACTUAL 2017</p> <table border="1"> <caption>GLADSTONE BARRAMUNDI CATCH RATE FORECAST AND ACTUAL 2017 Data</caption> <thead> <tr> <th>Category</th> <th>Forecast Range</th> <th>Actual 2017</th> </tr> </thead> <tbody> <tr> <td>All Barra</td> <td>~1.0 - 1.3</td> <td>~2.0</td> </tr> <tr> <td>Legal Barra</td> <td>~0.8 - 1.0</td> <td>~1.5</td> </tr> </tbody> </table>	Category	Forecast Range	Actual 2017	All Barra	~1.0 - 1.3	~2.0	Legal Barra	~0.8 - 1.0	~1.5																																			
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Catch rates percentage change compared with 2016 <b>Revised</b>	Overall -15% (-5%--25%) <b>+50% (+30-+70%)</b> Legal fish -20% (-10--30%) <b>+50% (+30-+70%)</b>	Overall +62.3%  Legal fish +63.8%	<p>GLADSTONE BARRAMUNDI CATCH RATE 2017-2016</p> <table border="1"> <caption>GLADSTONE BARRAMUNDI CATCH RATE 2017-2016 Data</caption> <thead> <tr> <th>Category</th> <th>Predicted Change (%)</th> <th>Actual Change (%)</th> </tr> </thead> <tbody> <tr> <td>All Barra</td> <td>~-15</td> <td>+50</td> </tr> <tr> <td>Legal Barra</td> <td>~-20</td> <td>+50</td> </tr> </tbody> </table>	Category	Predicted Change (%)	Actual Change (%)	All Barra	~-15	+50	Legal Barra	~-20	+50																																			
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Barramundi tags in Gladstone indicator of trends in stock Most likely and range <b>Revised</b>	Tagged fish 2017 (Jan-Dec) 150 (50-250) <b>400 (300-500)</b> -30% (-20--40%) <b>+120% (+100-+140%)</b>	Tagged fish 2017 (Jan-Jun) 286 +57% compared with 2016	<p>BARRAMUNDI TAGS GLADSTONE ESTIMATE AND RANGE</p> <table border="1"> <caption>BARRAMUNDI TAGS GLADSTONE ESTIMATE AND RANGE Data (2008-2017)</caption> <thead> <tr> <th>Year</th> <th>Estimated Tags</th> </tr> </thead> <tbody> <tr><td>2008</td><td>~100</td></tr> <tr><td>2009</td><td>~100</td></tr> <tr><td>2010</td><td>~150</td></tr> <tr><td>2011</td><td>~1100</td></tr> <tr><td>2012</td><td>~1100</td></tr> <tr><td>2013</td><td>~1000</td></tr> <tr><td>2014</td><td>~700</td></tr> <tr><td>2015</td><td>~500</td></tr> <tr><td>2016</td><td>~400</td></tr> <tr><td>2017</td><td>~300</td></tr> </tbody> </table>	Year	Estimated Tags	2008	~100	2009	~100	2010	~150	2011	~1100	2012	~1100	2013	~1000	2014	~700	2015	~500	2016	~400	2017	~300																						
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<b>Recruitment</b> <b>Recruits/fisher/day</b>	Poor/Moderate 0.1 (0.05-0.15)	Poor	 <p><b>GLADSTONE BARRAMUNDI RECRUITMENT</b></p> <p>This chart displays recruitment (Recruits/Fisher/Day) as blue bars and the Climate Index as an orange line from 2008 to 2017. Recruitment peaks in 2009 and 2015, while the climate index shows a general downward trend with a notable dip in 2012.</p>
<b>Gladstone Harbour and Barramundi</b>		Low numbers of trophy fish	 <p><b>BARRAMUNDI IN GLADSTONE HARBOUR</b></p> <p>This scatter plot shows the length of barramundi in millimeters (mm) from 2007 to 2016, comparing Callemondah (blue dots) and Harbour (orange dots). Most fish fall between 400mm and 1000mm.</p>
<b>Calliope River flow and Barramundi</b>		Low numbers of trophy fish	 <p><b>BARRAMUNDI AND CALLIOPE FLOWS</b></p> <p>This chart shows flow in ML (blue bars) and length in mm (orange dots) from 2007 to 2017. Flow peaks in 2013, and length data is scattered between 200mm and 1400mm.</p>
<b>Boyne River flow and Barramundi (Flow data only to 2012)</b>		Fish spilled from Awoonga in Apr 2017	 <p><b>BARRAMUNDI AND BOYNE FLOW</b></p> <p>This chart shows flow in ML (blue bars) and length in mm (orange dots) from 2007 to 2018. A significant flow spike is visible in 2017, corresponding to the spill event.</p>
<b>Awoonga dam levels</b>	Did not spill in 2016 Spilled in Apr 2017	No data available for 2017	 <p><b>Awoonga Dam Water Level and Rainfall Data</b>          October 2015 - October 2016</p> <p>This chart shows water level (m) as a blue area and rainfall (mm) as blue bars. A major peak in water level is seen in early 2017, coinciding with the spill event.</p>
<b>Commercial catch</b> <b>Grids S29/S30/S31</b> <b>Catch (tonnes)</b> <b>Catch rate (kg/day)</b>	Catch 30 (27-33)  Catch rate 100 (90-110)	Catch 2016 27.2 (Feb-Oct) Catch rate 53.8 (Feb-Oct)	 <p><b>GLADSTONE BARRAMUNDI GRIDS S29/S30/S31 CATCH AND CATCH RATE</b></p> <p>This chart shows catch in tonnes (blue bars) and catch rate in kg/day (orange line) from 2008 to 2017. A major peak in both metrics occurred in 2011.</p>
<b>Commercial effort</b> <b>Grids S29/S30/S31</b> <b>Days fished</b>	No forecast	Days 505 (Feb-Oct) 51% increase from 2015-2016	 <p><b>GLADSTONE DAYS FISHED</b></p> <p>This bar chart shows the number of days fished from 2008 to 2017. There is a clear upward trend, with 2017 showing the highest number of days fished.</p>

<b>Climate outlook to Feb 2018</b>	BOM NINO34 Neutral conditions through to Feb 2018		
<b>Rainfall outlook Jun-Aug 2017</b>	BOM forecast 45-55% chance of exceeding median rainfall		

## DATA SOURCES

Data used in the Gladstone Barramundi Crystal Bowl are:

- ✦ Tag and catch records from Gladstone Sportfishing Club and other local taggers for maps GLD, CR02, BRG and CISG from <http://qld.info-fish.net>
- ✦ Recapture records of tagged fish <http://qld.info-fish.net>
- ✦ Commercial catch for QFISH grids S29, S30 and S31 from <http://qfish.daf.qld.gov.au>
- ✦ Recruitment surveys for Suntag maps GLD, CR02, BRG and CISG from <http://qld.info-fish.net>
- ✦ River flow records for Calliope River at the Castlehope station 132001A from <https://water-monitoring.information.qld.gov.au>
- ✦ River flow records for the Boyne River at the Boyne station 133005A to 2012 from <https://water-monitoring.information.qld.gov.au>
- ✦ Awoonga Dam Water Levels and Rainfall data from GAWB <http://www.gawb.qld.gov.au/>
- ✦ Rainfall records for Gladstone station 049083 from <http://www.bom.gov.au/>
- ✦ Stocked fish records for Lake Awoonga and Lake Callemondah