



LAKEFIELD BARRAMUNDI 2011-2020

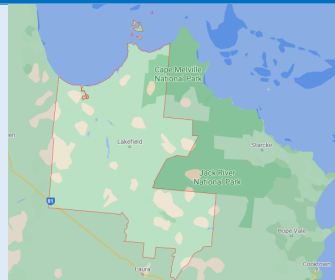
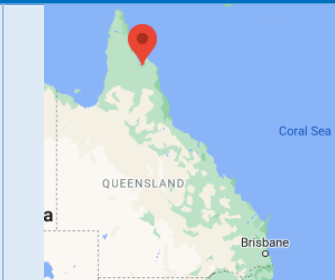

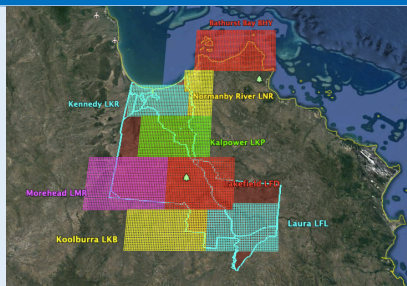
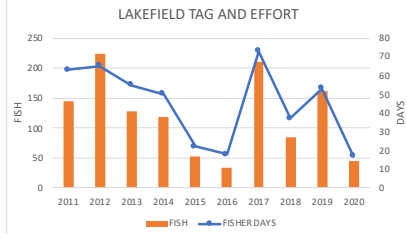
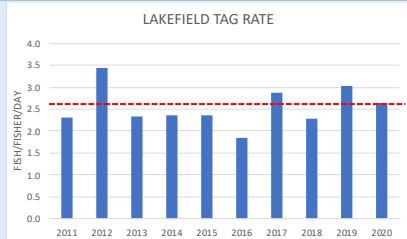
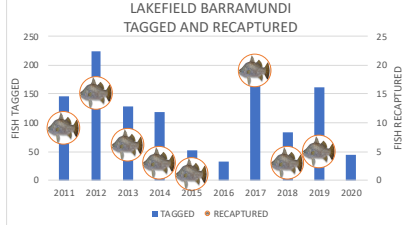
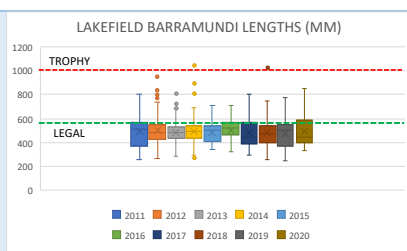
AVAILABLE		AVAILABLE	
Species		Barramundi	
Tagged fish	✓	Recaptures	✓
Catch rates	✓	Fish sizes	✓
Growth	✓	Survival	✓
Tag locations		Fish Movement	✓
Postcodes	✓	Competitions	

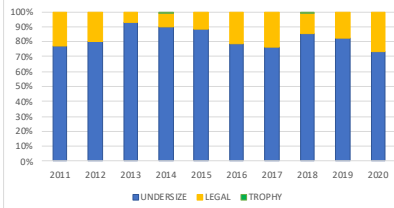
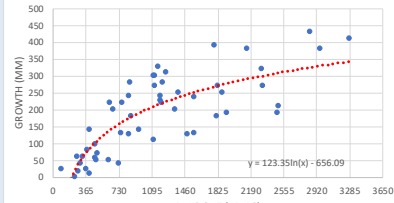
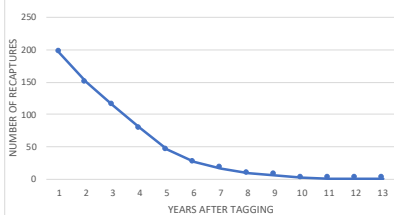
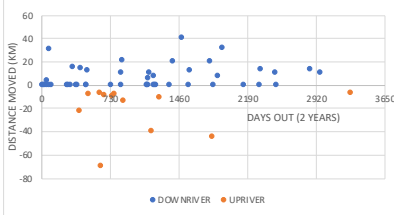
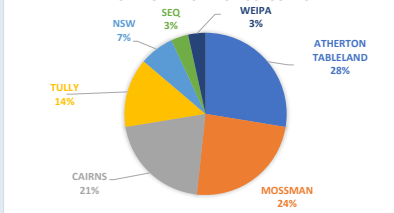


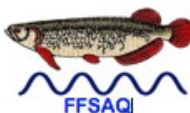

Summary

- Tagging of Barramundi in the Lakefield National Park has been ongoing since the 1980's providing a long timeline of data that helps understanding the dynamics of the fish
- This dashboard covers the past 10 years from 2011-2020
- From 2011-2020 there were 1,200 Barramundi tagged for 61 recaptures (5.1%)
- The tag rate has fluctuated from 1.8 fish/fisher day in 2016 to 3.4 in 2012 and was 2.6 in 2020 which is the same as the 10 year average
- The average length of Barramundi tagged was below the legal limit in all years as legal fish were often kept so the range of sizes is not reflective of the overall fish population
- Of the tagged fish over the 10 years there were 17.6% that were legal sized
- There were only 2 trophy fish tagged over the 10 years with one of 1050mm in 2014 and 1030mm in 2018
- Barramundi growth rate was very variable at 71mm by the end of year 1 and 270mm by the end of year 5
- Barramundi survival is similar to that in other river systems (11-12 years) with the longest time out being 12.8 years
- Recaptures show that most fish were recaptured in the same area as tagged (46%) while fish moved both upstream (20%) and downstream (34%) from where tagged
- Postcodes of fishers recapturing fish show that most come from the Atherton Tableland (28%), Mossman (24%) and Cairns (21%)

Inf fish Australia

March 2021

LAKEFIELD	LOCATION	BARRAMUNDI																																																																																							
																																																																																									
MEASURE	ACTUAL	GRAPH or MAP																																																																																							
Lakefield National Park Grid maps BHY LKP LNR LFD LKR LFL LKB LMR	Princess Charlotte Bay Bathurst Bay Normanby River North Kennedy River Bizant River Hann River Morehead River Annie River																																																																																								
Fishing effort (fisher days) and tagged fish 2011-2020	<table><tr><td>HIGHEST</td><td>LOWEST</td><td>NOW</td></tr><tr><td>TAGGED FISH</td><td></td><td></td></tr><tr><td>2012</td><td>2016</td><td>2020</td></tr><tr><td>224</td><td>33</td><td>45</td></tr><tr><td>EFFORT</td><td></td><td></td></tr><tr><td>2012</td><td>2016</td><td>2020</td></tr><tr><td>65</td><td>18</td><td>17</td></tr></table>	HIGHEST	LOWEST	NOW	TAGGED FISH			2012	2016	2020	224	33	45	EFFORT			2012	2016	2020	65	18	17	 <table><caption>LAKEFIELD TAG AND EFFORT</caption><tr><th>Year</th><th>Fish</th><th>Fisher Days</th></tr><tr><td>2011</td><td>140</td><td>65</td></tr><tr><td>2012</td><td>224</td><td>45</td></tr><tr><td>2013</td><td>130</td><td>35</td></tr><tr><td>2014</td><td>120</td><td>25</td></tr><tr><td>2015</td><td>80</td><td>15</td></tr><tr><td>2016</td><td>33</td><td>18</td></tr><tr><td>2017</td><td>210</td><td>70</td></tr><tr><td>2018</td><td>80</td><td>40</td></tr><tr><td>2019</td><td>160</td><td>55</td></tr><tr><td>2020</td><td>45</td><td>17</td></tr></table>	Year	Fish	Fisher Days	2011	140	65	2012	224	45	2013	130	35	2014	120	25	2015	80	15	2016	33	18	2017	210	70	2018	80	40	2019	160	55	2020	45	17																																	
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Average length (mm) Bars show smallest and largest fish Dots show outliers 2011-2020	<table><tr><td>HIGHEST</td><td>LOWEST</td><td>NOW</td></tr><tr><td>AVERAGE LENGTH</td><td></td><td></td></tr><tr><td>2009</td><td>2011</td><td>2020</td></tr><tr><td>282</td><td>245</td><td>272</td></tr><tr><td>LARGEST</td><td></td><td></td></tr><tr><td>2009</td><td>2011</td><td>2020</td></tr><tr><td>420</td><td>325</td><td>370</td></tr></table>	HIGHEST	LOWEST	NOW	AVERAGE LENGTH			2009	2011	2020	282	245	272	LARGEST			2009	2011	2020	420	325	370	 <table><caption>LAKEFIELD BARRAMUNDI LENGTHS (MM)</caption><tr><th>Year</th><th>Min</th><th>Q1</th><th>Median</th><th>Q3</th><th>Max</th></tr><tr><td>2011</td><td>350</td><td>450</td><td>550</td><td>650</td><td>850</td></tr><tr><td>2012</td><td>350</td><td>450</td><td>550</td><td>650</td><td>850</td></tr><tr><td>2013</td><td>350</td><td>450</td><td>550</td><td>650</td><td>850</td></tr><tr><td>2014</td><td>350</td><td>450</td><td>550</td><td>650</td><td>850</td></tr><tr><td>2015</td><td>350</td><td>450</td><td>550</td><td>650</td><td>850</td></tr><tr><td>2016</td><td>350</td><td>450</td><td>550</td><td>650</td><td>850</td></tr><tr><td>2017</td><td>350</td><td>450</td><td>550</td><td>650</td><td>850</td></tr><tr><td>2018</td><td>350</td><td>450</td><td>550</td><td>650</td><td>850</td></tr><tr><td>2019</td><td>350</td><td>450</td><td>550</td><td>650</td><td>850</td></tr><tr><td>2020</td><td>350</td><td>450</td><td>550</td><td>650</td><td>850</td></tr></table>	Year	Min	Q1	Median	Q3	Max	2011	350	450	550	650	850	2012	350	450	550	650	850	2013	350	450	550	650	850	2014	350	450	550	650	850	2015	350	450	550	650	850	2016	350	450	550	650	850	2017	350	450	550	650	850	2018	350	450	550	650	850	2019	350	450	550	650	850	2020	350	450	550	650	850
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Fish length percentage (%) Undersize <580mm Legal 580-999mm Trophy 1000+mm 2011-2020	<table><tr><td>HIGHEST</td><td>LOWEST</td><td>NOW</td></tr><tr><td>LEGAL</td><td></td><td></td></tr><tr><td>2017</td><td>2013</td><td>2020</td></tr><tr><td>23.3</td><td>7.0</td><td>26.7</td></tr><tr><td colspan="3">TROPHY</td></tr><tr><td colspan="3">No fish over 500mm in any year</td></tr></table>	HIGHEST	LOWEST	NOW	LEGAL			2017	2013	2020	23.3	7.0	26.7	TROPHY			No fish over 500mm in any year			<p>LAKEFIELD BARRAMUNDI LENGTHS</p> 
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Barramundi growth based on recaptures 2011-2020	<table><tr><td>Recaptures</td><td>53</td></tr><tr><td>Growth at end of year (mm)</td><td></td></tr><tr><td>Year 1</td><td>72</td></tr><tr><td>Year 2</td><td>157</td></tr><tr><td>Year 3</td><td>207</td></tr><tr><td>Year 4</td><td>243</td></tr><tr><td>Year 5</td><td>270</td></tr></table>	Recaptures	53	Growth at end of year (mm)		Year 1	72	Year 2	157	Year 3	207	Year 4	243	Year 5	270	<p>LAKEFIELD BARRAMUNDI GROWTH</p> 				
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Barramundi survival based on recaptures by years out after tagging 1985-2020	<table><tr><td>Year</td><td>Recaptures</td></tr><tr><td>1</td><td>196</td></tr><tr><td>5</td><td>45</td></tr><tr><td>10</td><td>2</td></tr><tr><td>12</td><td>1</td></tr><tr><td>Longest time out (years)</td><td>12.8</td></tr></table>	Year	Recaptures	1	196	5	45	10	2	12	1	Longest time out (years)	12.8	<p>LAKEFIELD BARRAMUNDI SURVIVAL</p> 						
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Grid locations of tagged fish 2011-2020	Grids where most fish caught Not for publication																			
Barramundi movements 2011-2020	<table><tr><td>Recaptures</td><td>59</td></tr><tr><td>Recaptured same area</td><td>27 (46%)</td></tr><tr><td>Upriver</td><td>12 (20%)</td></tr><tr><td>Downriver</td><td>20 (34%)</td></tr></table>	Recaptures	59	Recaptured same area	27 (46%)	Upriver	12 (20%)	Downriver	20 (34%)	<p>LAKEFIELD BARRAMUNDI MOVEMENT</p> 										
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Postcodes of recapture fishers 2009-2020	<table><tr><td>Postcode fishers</td><td>29</td></tr><tr><td>Atherton Tableland</td><td>28%</td></tr><tr><td>Mossman</td><td>24%</td></tr><tr><td>Cairns</td><td>21%</td></tr><tr><td>Tully</td><td>4%</td></tr><tr><td>NSW</td><td>7%</td></tr></table>	Postcode fishers	29	Atherton Tableland	28%	Mossman	24%	Cairns	21%	Tully	4%	NSW	7%	<p>RECAPTURE FISHERS POSTCODES</p> 						
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<div></div> <p>Product of Infotish Australia</p>		<div></div> <p>Supported by Suntag and FFSAQ</p>																		

Data sources

Data used in the Lakefield Crystal Bowl are:

- Tag records and recapture records at <http://crystalbowl.infofishaustralia.com.au/>

Basis for analysis

- Catch rates calculated as number of fish tagged/fisher day for T20 fishers (taggers) with a minimum of 12 fisher days (at least 1 per month) to provide a reliable catch rate
- Undersized fish are <580mm, legal fish are ≥580 and <1000mm and trophy fish are ≥1000mm
- Growth calculated using a logarithmic curve from recaptures where fish were out for 90 days or more and had positive growth
- Locations based on Infofish grid maps Bathurst (BHY), Normanby River (LNR), Kennedy (LKR), Kalpower (LKP), Lakefield (LFD), Morehead (LMR), Koolburra (LKB) and Laura (LFL)
- Survival based on the number of recaptures for each year after tagging