



## HINCHINBROOK 2011-2020

### 2020 REVIEW




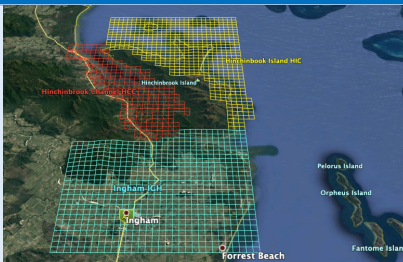
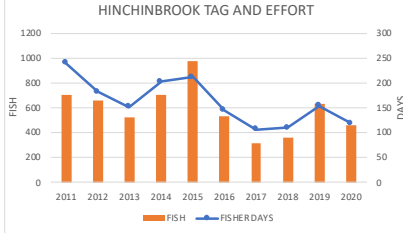
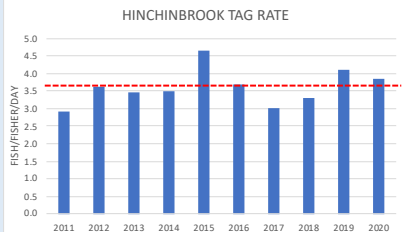
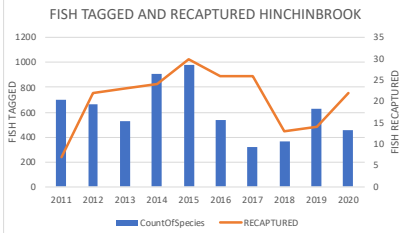
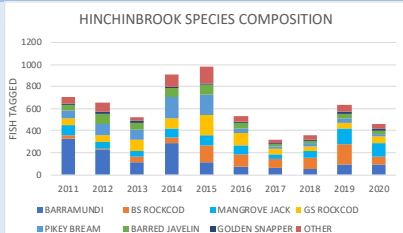
## **Tagged fish numbers, catch rates, fish sizes, growth, locations and recaptured fish**

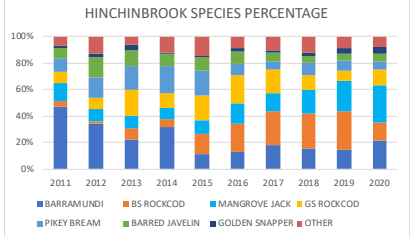
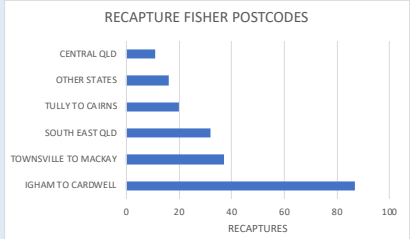
The following dashboard provides a summary of data for the Hinchinbrook area from Cardwell to Ingham covering the past 10 years.


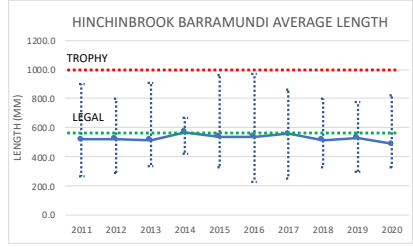
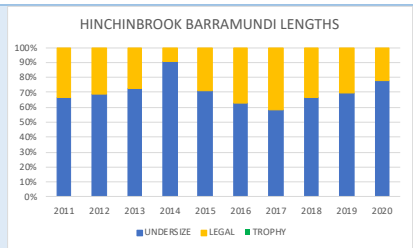
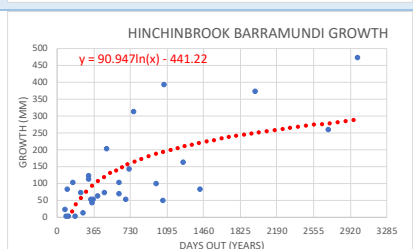
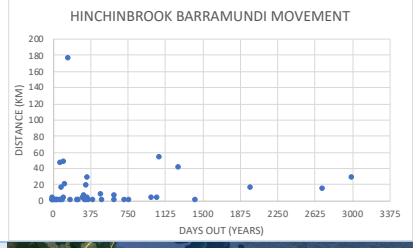

### **Summary**


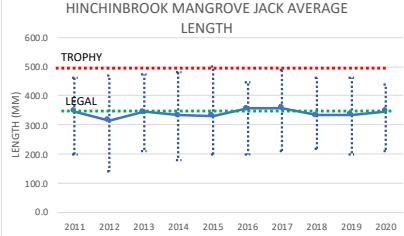
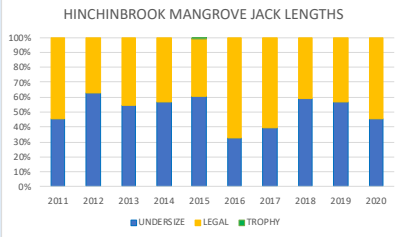
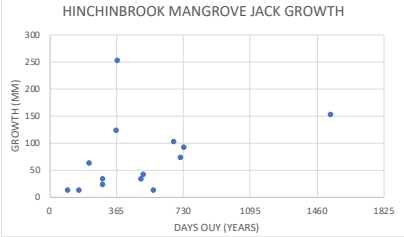
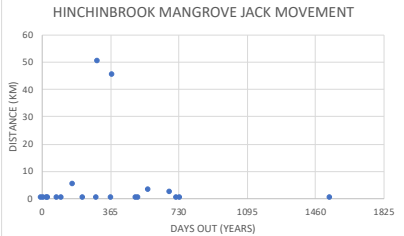
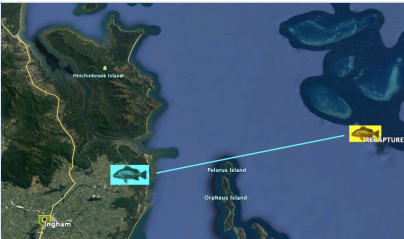
- From 2011-2020 there were 6,074 fish tagged for 207 recaptures (3.4%) in the Hinchinbrook area covered by grid maps HCC, HIC and IGH
- Key species tagged were Barramundi 23.5%, Blackspotted Rockcod 13.9% and Mangrove Jack 13.7%, Goldspotted Rockcod 13.4% and Pikey Bream 13.4% accounting for 78.0% of all fish tagged
- The catch rate was calculated as the number of fish tagged/fisher day and the rate in 2020 was 3.8 which is a little above the 10 year average historic catch rate of 3.6 fish/fisher day
- Of the 203 recaptures with the postcode of the fisher recorded 87 (42.7%) were local from Ingham-Cardwell
- The remaining 116 recapture fishers were from the Cairns area in the north to South East Qld in the south with 16 (7.9%) being interstate fishers mostly from NSW
- Postcodes of recaptures suggest that the Hinchinbrook area is attractive for visiting fishers
- The average length of Barramundi in 2020 was 490mm and ranged from 330-820mm with the average length over the past 10 years being below legal size of 580mm
- No trophy fish 1+m were tagged over the past 10 years
- The percentage of legal Barramundi in 2020 was 21.9%
- Over the past 10 years 42.7% of Barramundi recaptures were in the same area as tagged with 6 fish being recaptured outside the Hinchinbrook area
- The average length of Mangrove Jack in 2020 was 346mm and has been close to the minimum legal length of 350mm for the past 10 years
- Of the 19 Mangrove Jack recaptures 14 (73.7%) were recaptured in the same area as tagged with 1 fish recaptured offshore 50km east
- Blackspotted and Goldspotted Rockcod data were combined as they are closely related species with similar habits
- The average length of Rockcod in 2020 was 327mm and had been below the minimum legal length of 380mm for the past 10 years with just 13 trophy fish over 600mm in that time
- Of the 92 Rockcod recaptures 79 (85.9%) were recaptured in the same area as tagged with the longest distance moved being 22km and no recaptures recorded outside the area



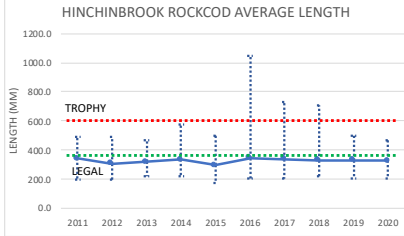
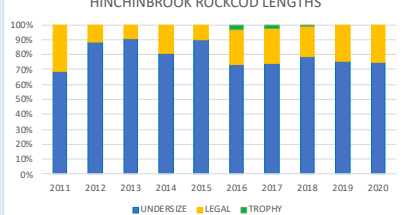
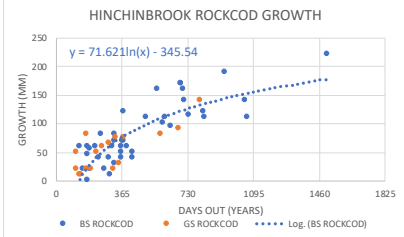
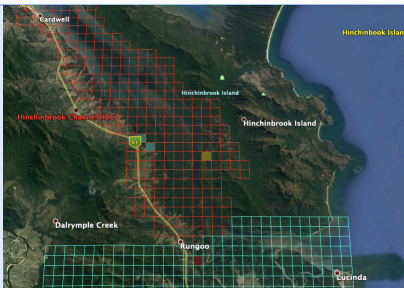
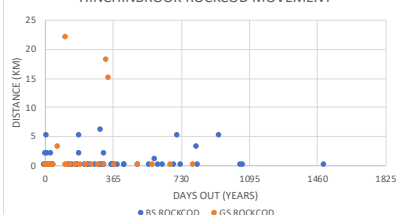
Infotish Australia  
January 2021

HINCHINBROOK	BARRAMUNDI MANGROVE JACK	GOLDSPOTTED ROCKCOD BLACKSPOTTED ROCKCOD																																																																																																			
																																																																																																					
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Species composition Numbers tagged 2011-2020	BARRAMUNDI 1,427 BLACKSPOTTED/GOLDSPOTT ED ROCKCOD 846/816 MANGROVE JACK 835 PIKEY BREAM 812	 <table><tr><th>Year</th><th>Barramundi</th><th>BS Rockcod</th><th>Mangrove Jack</th><th>GS Rockcod</th><th>Pikey Bream</th><th>Barred Javelin</th><th>Golden Snapper</th><th>Other</th></tr><tr><td>2011</td><td>700</td><td>100</td><td>50</td><td>20</td><td>10</td><td>10</td><td>10</td><td>10</td></tr><tr><td>2012</td><td>650</td><td>100</td><td>50</td><td>20</td><td>10</td><td>10</td><td>10</td><td>10</td></tr><tr><td>2013</td><td>550</td><td>100</td><td>50</td><td>20</td><td>10</td><td>10</td><td>10</td><td>10</td></tr><tr><td>2014</td><td>700</td><td>100</td><td>50</td><td>20</td><td>10</td><td>10</td><td>10</td><td>10</td></tr><tr><td>2015</td><td>950</td><td>100</td><td>50</td><td>20</td><td>10</td><td>10</td><td>10</td><td>10</td></tr><tr><td>2016</td><td>550</td><td>100</td><td>50</td><td>20</td><td>10</td><td>10</td><td>10</td><td>10</td></tr><tr><td>2017</td><td>350</td><td>100</td><td>50</td><td>20</td><td>10</td><td>10</td><td>10</td><td>10</td></tr><tr><td>2018</td><td>400</td><td>100</td><td>50</td><td>20</td><td>10</td><td>10</td><td>10</td><td>10</td></tr><tr><td>2019</td><td>600</td><td>100</td><td>50</td><td>20</td><td>10</td><td>10</td><td>10</td><td>10</td></tr><tr><td>2020</td><td>450</td><td>100</td><td>50</td><td>20</td><td>10</td><td>10</td><td>10</td><td>10</td></tr></table>	Year	Barramundi	BS Rockcod	Mangrove Jack	GS Rockcod	Pikey Bream	Barred Javelin	Golden Snapper	Other	2011	700	100	50	20	10	10	10	10	2012	650	100	50	20	10	10	10	10	2013	550	100	50	20	10	10	10	10	2014	700	100	50	20	10	10	10	10	2015	950	100	50	20	10	10	10	10	2016	550	100	50	20	10	10	10	10	2017	350	100	50	20	10	10	10	10	2018	400	100	50	20	10	10	10	10	2019	600	100	50	20	10	10	10	10	2020	450	100	50	20	10	10	10	10
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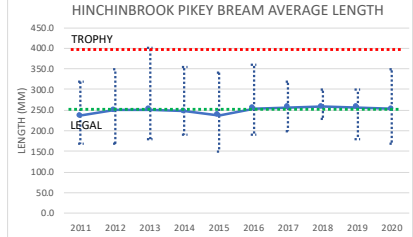
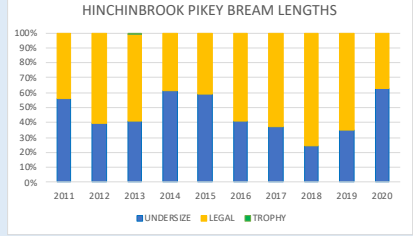
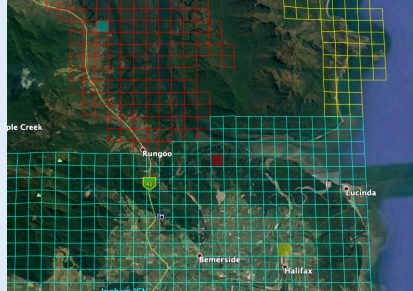
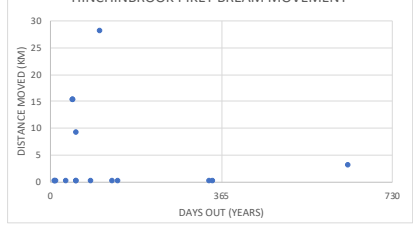



<b>Species composition</b> <b>Percentage tagged</b> <b>2011-2020</b>	BARRAMUNDI 23.5% BLACKSPOTTED/GOLDSPOTT ED ROCKCOD 13.9%/13.4% MANGROVE JACK 13.7% PIKEY BREAM 13.4%	 <p>HINCHINBROOK SPECIES PERCENTAGE</p> <table><thead><tr><th>Year</th><th>BARRAMUNDI</th><th>BS ROCKCOD</th><th>MANGROVE JACK</th><th>GS ROCKCOD</th><th>PIKEY BREAM</th><th>BARRED JAVELIN</th><th>GOLDEN SNAPPER</th><th>OTHER</th></tr></thead><tbody><tr><td>2011</td><td>45%</td><td>5%</td><td>10%</td><td>5%</td><td>10%</td><td>5%</td><td>5%</td><td>15%</td></tr><tr><td>2012</td><td>35%</td><td>10%</td><td>15%</td><td>10%</td><td>10%</td><td>5%</td><td>5%</td><td>10%</td></tr><tr><td>2013</td><td>25%</td><td>15%</td><td>20%</td><td>10%</td><td>10%</td><td>5%</td><td>5%</td><td>10%</td></tr><tr><td>2014</td><td>20%</td><td>20%</td><td>25%</td><td>10%</td><td>10%</td><td>5%</td><td>5%</td><td>10%</td></tr><tr><td>2015</td><td>15%</td><td>25%</td><td>30%</td><td>10%</td><td>10%</td><td>5%</td><td>5%</td><td>10%</td></tr><tr><td>2016</td><td>10%</td><td>30%</td><td>35%</td><td>10%</td><td>10%</td><td>5%</td><td>5%</td><td>10%</td></tr><tr><td>2017</td><td>15%</td><td>25%</td><td>30%</td><td>10%</td><td>10%</td><td>5%</td><td>5%</td><td>10%</td></tr><tr><td>2018</td><td>15%</td><td>25%</td><td>30%</td><td>10%</td><td>10%</td><td>5%</td><td>5%</td><td>10%</td></tr><tr><td>2019</td><td>15%</td><td>25%</td><td>30%</td><td>10%</td><td>10%</td><td>5%</td><td>5%</td><td>10%</td></tr><tr><td>2020</td><td>15%</td><td>25%</td><td>30%</td><td>10%</td><td>10%</td><td>5%</td><td>5%</td><td>10%</td></tr></tbody></table>	Year	BARRAMUNDI	BS ROCKCOD	MANGROVE JACK	GS ROCKCOD	PIKEY BREAM	BARRED JAVELIN	GOLDEN SNAPPER	OTHER	2011	45%	5%	10%	5%	10%	5%	5%	15%	2012	35%	10%	15%	10%	10%	5%	5%	10%	2013	25%	15%	20%	10%	10%	5%	5%	10%	2014	20%	20%	25%	10%	10%	5%	5%	10%	2015	15%	25%	30%	10%	10%	5%	5%	10%	2016	10%	30%	35%	10%	10%	5%	5%	10%	2017	15%	25%	30%	10%	10%	5%	5%	10%	2018	15%	25%	30%	10%	10%	5%	5%	10%	2019	15%	25%	30%	10%	10%	5%	5%	10%	2020	15%	25%	30%	10%	10%	5%	5%	10%
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<b>Postcodes of recapture</b> <b>fishers (203 with</b> <b>postcodes)</b> <b>2011-2020</b>	<table><thead><tr><th>POSTCODES</th><th>FISHERS</th></tr></thead><tbody><tr><td>INGHAM-CARDWELL</td><td>87</td></tr><tr><td>TOWNSVILLE</td><td>37</td></tr><tr><td>SE QLD</td><td>32</td></tr><tr><td>TULLY-CAIRNS</td><td>20</td></tr><tr><td>OTHER STATES</td><td>16</td></tr><tr><td>CENTRAL QLD</td><td>11</td></tr></tbody></table>	POSTCODES	FISHERS	INGHAM-CARDWELL	87	TOWNSVILLE	37	SE QLD	32	TULLY-CAIRNS	20	OTHER STATES	16	CENTRAL QLD	11	 <p>RECAPTURE FISHER POSTCODES</p> <table><thead><tr><th>Postcode</th><th>Recaptures</th></tr></thead><tbody><tr><td>CENTRAL QLD</td><td>11</td></tr><tr><td>OTHER STATES</td><td>16</td></tr><tr><td>TULLY TO CAIRNS</td><td>20</td></tr><tr><td>SOUTH EAST QLD</td><td>32</td></tr><tr><td>TOWNSVILLE TO MACKAY</td><td>37</td></tr><tr><td>IGHAM TO CARDWELL</td><td>87</td></tr></tbody></table>	Postcode	Recaptures	CENTRAL QLD	11	OTHER STATES	16	TULLY TO CAIRNS	20	SOUTH EAST QLD	32	TOWNSVILLE TO MACKAY	37	IGHAM TO CARDWELL	87																																																																							
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HIGHEST	LOWEST	NOW																					
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TROPHY																							
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Barramundi growth at the end of each year based on all recaptures since 2011 (30)	<table><tr><td>GROWTH</td><td></td></tr><tr><td>YEAR 1</td><td>95mm</td></tr><tr><td>YEAR 2</td><td>158mm</td></tr><tr><td>YEAR 3</td><td>195mm</td></tr><tr><td>YEAR 4</td><td>221mm</td></tr><tr><td>YEAR 5</td><td>242mm</td></tr></table>	GROWTH		YEAR 1	95mm	YEAR 2	158mm	YEAR 3	195mm	YEAR 4	221mm	YEAR 5	242mm										
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Grid locations of tagged fish (maps HCC, HIC, IGH) 2011-2020	<table><tr><td>Grids where most fish caught</td><td></td></tr><tr><td>GRID</td><td>FISH</td></tr></table>	Grids where most fish caught		GRID	FISH																		
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Barramundi movements Hinchinbrook area (45) Distance moved (km) 2011-2020	<table><tr><td>Recaptured same area</td><td>21 (46.7%)</td></tr><tr><td>Longest distance north</td><td>53</td></tr><tr><td>Longest distance south</td><td>175</td></tr></table>	Recaptured same area	21 (46.7%)	Longest distance north	53	Longest distance south	175																
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Barramundi recaptured outside Hinchinbrook area (6) Recapture location 2011-2020	<table><tr><td>North to Tully River</td><td>4</td></tr><tr><td>South to Townsville</td><td>2</td></tr></table>	North to Tully River	4	South to Townsville	2																		
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MEASURE	ACTUAL	GRAPH or MAP																					
Mangrove Jack																							
<b>Average length (mm)</b> <b>Bars show smallest to largest fish</b> <b>2011-2020</b>	<table> <tr> <th>HIGHEST</th><th>LOWEST</th><th>NOW</th></tr> <tr> <td>2016</td><td>2012</td><td>2020</td></tr> <tr> <td>366</td><td>316</td><td>346</td></tr> <tr> <td colspan="3">LARGEST</td></tr> <tr> <td>2015</td><td>2016</td><td>2020</td></tr> <tr> <td>500</td><td>445</td><td>440</td></tr> </table>	HIGHEST	LOWEST	NOW	2016	2012	2020	366	316	346	LARGEST			2015	2016	2020	500	445	440				
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<b>Fish lengths percentage</b> <b>Undersize &lt;350mm</b> <b>Legal 350-500mm</b> <b>Trophy 500+mm</b> <b>2011-2020</b>	<table> <tr> <th>HIGHEST</th><th>LOWEST</th><th>NOW</th></tr> <tr> <td>LEGAL</td><td></td><td></td></tr> <tr> <td>2016</td><td>2012</td><td>2020</td></tr> <tr> <td>67.1</td><td>37.1</td><td>54.7</td></tr> <tr> <td colspan="3">TROPHY</td></tr> <tr> <td>2015</td><td>2016-19</td><td>2020</td></tr> <tr> <td>1.0</td><td>0</td><td>0</td></tr> </table>	HIGHEST	LOWEST	NOW	LEGAL			2016	2012	2020	67.1	37.1	54.7	TROPHY			2015	2016-19	2020	1.0	0	0	
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<b>Mangrove Jack growth at the end of each year based on all recaptures since 2011 (14)</b>	Insufficient recaptures																						
<b>Grid locations of tagged fish (map HCC, HIC, IGH) 2011-2020</b>	Grids where most fish caught GRID FISH																						
<b>Mangrove Jack movements</b> <b>Hinchinbrook area</b> <b>Distance moved (km)</b> <b>2011-2020</b>	Recaptures 19 Recaptured same area 14 (73.7%) Longest distance moved 50																						
<b>Mangrove Jack recaptured outside Hinchinbrook area 2011-2020</b>	Recaptures 1 Moved 50km offshore																						

MEASURE	ACTUAL	GRAPH or MAP																					
Blackspotted Rockcod Goldspotted Rockcod																							
Average length (mm) Both species Bars show smallest to largest fish 2011-2020	<table><tr><th>HIGHEST</th><th>LOWEST</th><th>NOW</th></tr><tr><td colspan="3">AVERAGE LENGTH</td></tr><tr><td>2016</td><td>2015</td><td>2020</td></tr><tr><td>348</td><td>298</td><td>327</td></tr><tr><td colspan="3">LARGEST</td></tr><tr><td>2015</td><td>2013</td><td>2020</td></tr><tr><td>1050</td><td>470</td><td>470</td></tr></table>	HIGHEST	LOWEST	NOW	AVERAGE LENGTH			2016	2015	2020	348	298	327	LARGEST			2015	2013	2020	1050	470	470	
HIGHEST	LOWEST	NOW																					
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Fish lengths percentage Both species Undersize <380mm Legal 380-600mm Trophy 600+mm 2011-2020	<table><tr><th>HIGHEST</th><th>LOWEST</th><th>NOW</th></tr><tr><td colspan="3">LEGAL</td></tr><tr><td>2011</td><td>2013</td><td>2020</td></tr><tr><td>31.2</td><td>9.4</td><td>25.0</td></tr><tr><td colspan="3">TROPHY</td></tr><tr><td>2016</td><td>2019</td><td>2020</td></tr><tr><td>3.5</td><td>0</td><td>0</td></tr></table>	HIGHEST	LOWEST	NOW	LEGAL			2011	2013	2020	31.2	9.4	25.0	TROPHY			2016	2019	2020	3.5	0	0	
HIGHEST	LOWEST	NOW																					
LEGAL																							
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Both species growth at the end of each year based on all recaptures Blackspotted Rockcod (43) Goldspotted Rockcod (17) since 2011	<table><tr><td colspan="2">Blackspotted Rockcod</td></tr><tr><td>YEAR 1</td><td>77mm</td></tr><tr><td>YEAR 2</td><td>126mm</td></tr><tr><td>YEAR 3</td><td>156mm</td></tr><tr><td>YEAR 4</td><td>176mm</td></tr><tr><td>YEAR 5</td><td>192mm</td></tr><tr><td colspan="2">Goldspotted Rockcod</td></tr><tr><td colspan="2">Insufficient data</td></tr></table>	Blackspotted Rockcod		YEAR 1	77mm	YEAR 2	126mm	YEAR 3	156mm	YEAR 4	176mm	YEAR 5	192mm	Goldspotted Rockcod		Insufficient data							
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Grid locations of tagged fish (maps HCC, HIC, IGH) 2011-2020	<table><tr><td colspan="2">Grids where most fish caught</td></tr><tr><td>GRID</td><td>FISH</td></tr><tr><td>IGH-U52</td><td>184</td></tr><tr><td>HCC-V63</td><td>141</td></tr><tr><td>HCC-O65</td><td>90</td></tr><tr><td>HCC-P64</td><td>83</td></tr></table>	Grids where most fish caught		GRID	FISH	IGH-U52	184	HCC-V63	141	HCC-O65	90	HCC-P64	83										
Grids where most fish caught																							
GRID	FISH																						
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Rockcod movements Hinchinbrook area Blackspotted Rockcod (53) Goldspotted Rockcod (38) Distance moved (km) 2011-2020	<table><tr><td colspan="2">Recaptured same area</td></tr><tr><td>79 (85.9%)</td><td></td></tr><tr><td colspan="2">Longest distance moved</td></tr><tr><td>22</td><td></td></tr><tr><td colspan="2">No recaptures outside Hinchinbrook area</td></tr></table>	Recaptured same area		79 (85.9%)		Longest distance moved		22		No recaptures outside Hinchinbrook area													
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MEASURE	ACTUAL	GRAPH or MAP																					
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Average length (mm) Bars show smallest to largest fish 2011-2020	<table><tr><td>HIGHEST</td><td>LOWEST</td><td>NOW</td></tr><tr><td colspan="3">AVERAGE LENGTH</td></tr><tr><td>2018</td><td>2011</td><td>2020</td></tr><tr><td>259</td><td>236</td><td>253</td></tr><tr><td colspan="3">LARGEST</td></tr><tr><td>2013</td><td>2019</td><td>2020</td></tr><tr><td>400</td><td>300</td><td>350</td></tr></table>	HIGHEST	LOWEST	NOW	AVERAGE LENGTH			2018	2011	2020	259	236	253	LARGEST			2013	2019	2020	400	300	350	
HIGHEST	LOWEST	NOW																					
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Fish lengths percentage Undersize <250mm Legal 250-399mm Trophy 400+mm 2011-2020	<table><tr><td>HIGHEST</td><td>LOWEST</td><td>NOW</td></tr><tr><td colspan="3">LEGAL</td></tr><tr><td>2018</td><td>2014</td><td>2020</td></tr><tr><td>75.8</td><td>38.7</td><td>37.0</td></tr><tr><td colspan="3">TROPHY</td></tr><tr><td>2013</td><td>2014-19</td><td>2020</td></tr><tr><td>1.1</td><td>0</td><td>0</td></tr></table>	HIGHEST	LOWEST	NOW	LEGAL			2018	2014	2020	75.8	38.7	37.0	TROPHY			2013	2014-19	2020	1.1	0	0	
HIGHEST	LOWEST	NOW																					
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Growth at the end of each year based on all recaptures since 2011	Insufficient data Recaptures 5																						
Grid locations of tagged fish (maps HCC, HIC, IGH) 2011-2020	<table><tr><td colspan="2">Grids where most fish caught</td></tr><tr><td>GRID</td><td>FISH</td></tr><tr><td>IGH-Y53</td><td>54</td></tr><tr><td>IGH-AD46</td><td>42</td></tr><tr><td>HCC-P64</td><td>40</td></tr></table>	Grids where most fish caught		GRID	FISH	IGH-Y53	54	IGH-AD46	42	HCC-P64	40												
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Pikey Bream movements Hinchinbrook area Distance moved (km) 2011-2020	<table><tr><td>Recaptures</td><td>17</td></tr><tr><td>Recaptured same area</td><td>11 (64.7%)</td></tr><tr><td>Longest distance moved</td><td>28</td></tr><tr><td>No recaptures outside Hinchinbrook area</td><td></td></tr></table>	Recaptures	17	Recaptured same area	11 (64.7%)	Longest distance moved	28	No recaptures outside Hinchinbrook area															
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<div></div> <div></div> <div>Product of Infotish Australia</div>		<div></div> <div>Supported by Suntag</div>																					

## Data sources

Data used in the Hinchinbrook 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 taggers with a minimum of 12 fisher days (at least 1 per month) to provide a reliable catch rate
- For Barramundi undersized fish are <580mm, legal fish are ≥580 and <1000mm and trophy fish are ≥1000mm
- For Mangrove Jack undersized fish are <350mm, legal fish are ≥350 and <500mm and trophy fish are ≥500mm
- For Rockcod undersized fish are <380mm, legal fish are ≥380 and <600mm and trophy fish are ≥600mm
- Analysis of Goldspotted Rockcod and Blackspotted Rockcod is based on combined records as the species are closely related
- Growth calculated using logarithmic curve from recaptures where fish were out for 90 days or more and had positive growth
- Locations based on Infofish grid maps HCC, HIC and IGH and other grid maps where fish were recaptured outside the area
- Movement has been calculated as the shortest distance by water from the tag to the recapture location derived from Google Earth