



FISHER BEHAVIOUR 1990-2020 2020 REVIEW


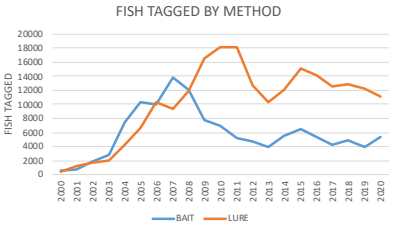
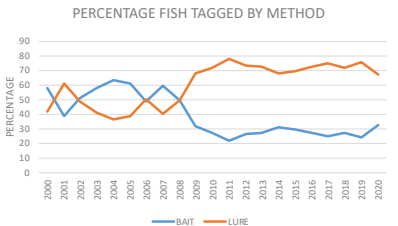
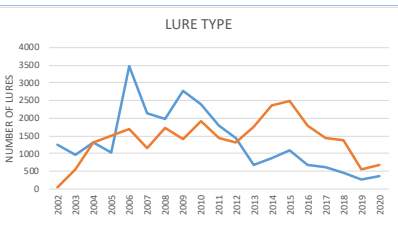
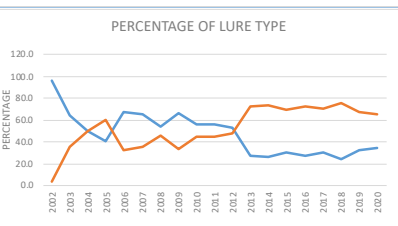
Changes in Fisher Behaviour


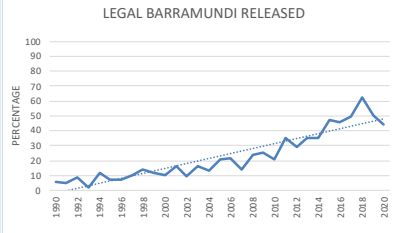
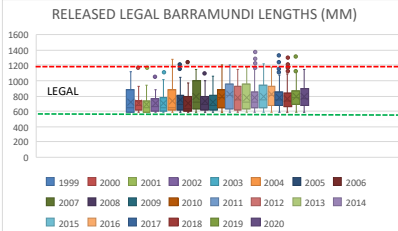
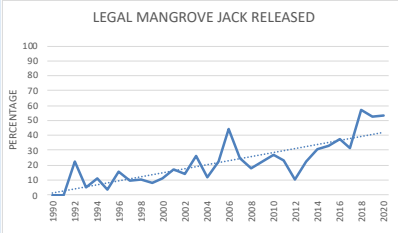
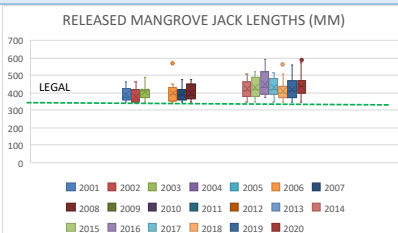
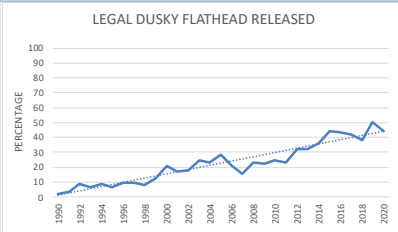
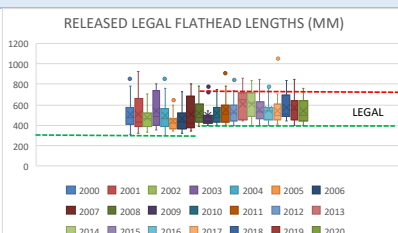
Tag and recapture data over a long time period can be used to examine elements of fisher behaviour. Suntag data over the past 20-30 year was reviewed to determine changes in behaviour over time. A change from using bait to lure and a change in using lure types is a change in both behaviour and fishing method. Recaptures of tagged fish by recreational fishers (excluding taggers) is close to a random sample of the fishing population and the release of legal tagged fish which could have been kept is a reflection of a change in general fisher behaviour.

MONITORING ELEMENTS	METHOD	BEHAVIOUR
Lures versus bait in tagging fish	✓	✓
Hardbody versus softbody lures when tagging fish	✓	✓
Releasing legal sized recaptured species by recreational fishers		
Barramundi		✓
Mangrove Jack		✓
Dusky Flathead		✓
Yellowfin Bream		✓
Australian Bass		✓
Golden Perch		✓

Observations

- From 2000-2008 the use of bait and lure when tagging fish was roughly the same however from 2008 onward around 70% of the fish were caught using lure
- In 2000 96% of fish were caught using hardbody lures and they were the most used through to 2012 when there was an abrupt change and from then on around 70% of fish were caught on softbody lures
- There has been a change in the percentage of legal fish released from a low base of around 0-10% in 1990 to around 40-50% for Barramundi, Mangrove Jack, Dusky Flathead and Golden Perch in 2020
- For Yellowfin Bream the change is a little less at 20-30% while for Australian Bass it has risen from around 20% in 1990 to around 90% in 2020
- As well as a steady increase in the release rate the size of fish released has increased for Barramundi, Mangrove Jack and Flathead however has not changed for Bass which is more a reflection of the available size range of the fish
- There were insufficient numbers of fish for Bream and Golden Perch to assess any change in the lengths of fish released
- See **About the Observations** for further explanation

MEASURE	ACTUAL	GRAPH																					
METHOD		STATEWIDE PERSPECTIVE																					
Fishing method when tagging fish																							
Number of fish tagged using bait or lure 2000-2020	<table border="1"> <tr> <td></td> <td colspan="2">2000-2020</td> </tr> <tr> <td>Bait</td> <td>123,549</td> <td></td> </tr> <tr> <td>Lure</td> <td>213,526</td> <td></td> </tr> </table>		2000-2020		Bait	123,549		Lure	213,526														
	2000-2020																						
Bait	123,549																						
Lure	213,526																						
Percentage (%) of fish tagged using bait or lure 2000-2020	<table border="1"> <tr> <td></td> <td>Bait</td> <td>Lure</td> </tr> <tr> <td>2000</td> <td>58</td> <td>42</td> </tr> <tr> <td>2005</td> <td>61</td> <td>39</td> </tr> <tr> <td>2008</td> <td>50</td> <td>50</td> </tr> <tr> <td>2010</td> <td>28</td> <td>72</td> </tr> <tr> <td>2015</td> <td>30</td> <td>70</td> </tr> <tr> <td>2020</td> <td>33</td> <td>67</td> </tr> </table>		Bait	Lure	2000	58	42	2005	61	39	2008	50	50	2010	28	72	2015	30	70	2020	33	67	
	Bait	Lure																					
2000	58	42																					
2005	61	39																					
2008	50	50																					
2010	28	72																					
2015	30	70																					
2020	33	67																					
Number of fish tagged using hardbody or softbody lure 2000-2020	<table border="1"> <tr> <td></td> <td colspan="2">2000-2020</td> </tr> <tr> <td>Hard</td> <td>25,547</td> <td></td> </tr> <tr> <td>Soft</td> <td>26,410</td> <td></td> </tr> </table>		2000-2020		Hard	25,547		Soft	26,410														
	2000-2020																						
Hard	25,547																						
Soft	26,410																						
Percentage (%) of fish tagged using hardbody or softbody lure 2000-2020	<table border="1"> <tr> <td></td> <td>Hard</td> <td>Soft</td> </tr> <tr> <td>2000</td> <td>96</td> <td>4</td> </tr> <tr> <td>2006</td> <td>68</td> <td>32</td> </tr> <tr> <td>2012</td> <td>53</td> <td>47</td> </tr> <tr> <td>2013</td> <td>28</td> <td>72</td> </tr> <tr> <td>2016</td> <td>28</td> <td>72</td> </tr> <tr> <td>2020</td> <td>35</td> <td>65</td> </tr> </table>		Hard	Soft	2000	96	4	2006	68	32	2012	53	47	2013	28	72	2016	28	72	2020	35	65	
	Hard	Soft																					
2000	96	4																					
2006	68	32																					
2012	53	47																					
2013	28	72																					
2016	28	72																					
2020	35	65																					

MEASURE	ACTUAL	GRAPH
RECAPTURES		STATEWIDE PERSPECTIVE
Release of legal recaptured tagged fish by recreational fishers (excluding taggers)		
Percentage (%) legal Barramundi released Feb-Oct 1990-2020 (open season)	Barra 1995 8 2000 10 2005 21 2010 21 2015 47 2020 44	
Average lengths (mm) released Barramundi Feb-Oct 1999-2020 (open season)	Av length 2000 707 2005 752 2010 788 2015 800 2020 788	
Percentage (%) legal Mangrove Jack released 1990-2020	MJ 1995 4 2000 11 2005 23 2010 27 2015 33 2020 53	
Average lengths (mm) released Mangrove Jack 2001-2020 (limited numbers 2001-2015)	Av length 2001 392 2006 401 2010 NA 2015 429 2020 438	
Percentage (%) legal Dusky Flathead released 1990-2020	DF 1995 7 2000 21 2005 23 2010 29 2015 45 2020 45	
Average lengths (mm) released Dusky Flathead 2000-2020	Av length 2000 503 2005 434 2010 520 2015 555 2020 538	

<p>Percentage (%) legal Yellowfin Bream released 1990-2020 (insufficient length data)</p>	<p>YB</p> <p>1990 7 2000 28 2005 34 2010 24 2015 20 2020 35</p>	
<p>Percentage (%) legal Australian Bass Golden Perch released 1990-2020</p>	<p>AB</p> <p>1995 23 2000 47 2005 42 2010 74 2015 85 2020 88</p>	
<p>Average lengths (mm) released Australian Bass 2000-2020</p>	<p>Av length</p> <p>2000 389 2005 399 2010 394 2015 391 2020 400</p>	
<p>Percentage (%) legal Golden Perch released 1990-2020 (low annual numbers) (insufficient length data)</p>	<p>GP</p> <p>1995 16 2000 42 2005 17 2010 25 2015 75 2020 43</p>	

About the Observations

- Hardbody lures were categorised as those where there was no soft plastic and included minnow types, surface lures, jigs and flies
- Softbody lures were categories as those that had soft plastic bodies or elements and included scented lures

Data sources

Data used in the Fisher Behaviour Crystal Bowl are:

- Tag and recapture records for Queensland from Infofish Suntag database from http://crystalbowl.infofishaustralia.com.au/infofish/f_infofish.htm

Data analysis

- Data from 1990-2020 were used in the analyses
- The analysis took into account changes in the legal lengths of fish over time.
- For Barramundi the minimum legal length was 550mm from 1989-1999 and from then was 580mm with a maximum length of 1200mm
- For Mangrove Jack the minimum legal length has remained at 350mm for the whole time
- For Dusky Flathead the minimum length was 300mm to 2008 and then 400mm with a maximum length of 750mm
- For Yellowfin Bream the legal length was 230mm to 2008 and 250mm since then
- For Australian Bass and Golden Perch the legal length has remained at 300mm over the whole time
- For released Barramundi only data related to the open season Feb-Oct was used as all fish were required to be released during the closed season