

The Mud Crab Fishery (MCF) covers the majority of Queensland tidal waters, except closed waters (Figure 1). This report provides an update to fishing statistics up to 31 Dec 2013.

Mud crabs (*Scylla* spp.) are found throughout the Indo-Pacific region. In Australia, mud crabs are found in tropical and subtropical areas in association with mangrove-lined estuaries from southern New South Wales, north to the Exmouth Gulf in Western Australia. Mud crabs are sought after in the commercial and recreational sectors. Queensland is unique among Australian states in protecting all female mud crabs and only allowing males to be harvested.

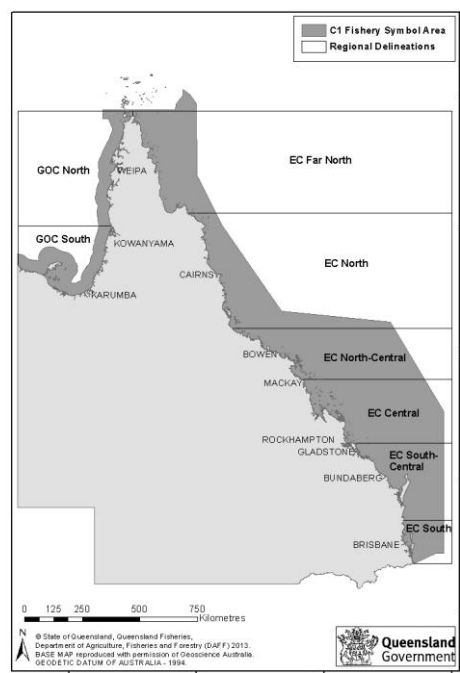


Figure 1: Boundary and regional delineations of the Mud Crab Fishery.

Main features of the fishery

Feature	Details for 2013
Species targeted	Mud crab (<i>Scylla</i> spp.)
Fishery symbols	C1
Current management regime	<i>Fisheries Act 1994</i> , Fisheries Regulation 2008
Gear	Commercial and Recreational <ul style="list-style-type: none"> Dillies (with the exception of inverted dillies) and crab pots (with rigid or collapsible frames).
Main management methods	Commercial and Recreational <ul style="list-style-type: none"> a minimum legal size limit of 150 mm carapace width, at the widest part a prohibition on taking female crabs closures (Eurimbula Creek and all adjoining waterways are closed to the harvesting of mud crabs, along with closures enforced through marine park zoning established under the Australian Government <i>Great Barrier Reef Marine Park Act 1975</i> and the Queensland <i>Marine Parks Act 2004</i>). Commercial only <ul style="list-style-type: none"> apparatus restrictions (50 pots/dillies per licence). Note – amendments have been made to fisheries legislation that allow the C1 fishery symbol to be written on a single commercial fishing licence more than once. Commercial fishers with multiple C1 fishery symbols written upon their licence will be able

	<p>to use up to 100 pots as part of their commercial fishing operation.</p> <ul style="list-style-type: none"> limited entry to the commercial fishery (C1 endorsement required) <p>Recreational only</p> <ul style="list-style-type: none"> apparatus restrictions (4 pots/dillies per person) in possession limit of 10 crabs per person.
Quota	Not quota managed
Fishing season	1 January to 31 December
Commercial fishery licences	Total number of licences with a C1 symbol: 430 as at December 2013 Number of C1 licences that reported mud crab catch in 2013: 384
Management changes	Nil in 2013. In May 2014, changes to the legislation allow multiple C1 s to be written on a Commercial Fishing Boat Licence allowing up to a maximum of 100 pots, traps or dillies.
Accreditation under the EPBC Act	Part 13: accredited 10 April 2008 Part 13A: current accreditation expires 20 February 2015
Total annual harvest by sectors	Commercial: 1351 t (2013 logbook returns) Charter: 0.3 t Recreational: 366 t (2010 Statewide Recreational Fishing Survey ¹)
GVP	GVP : Approximately \$22 million in 2013 (based on commercial beach price)
Stock status	Gulf of Carpentaria: Sustainably fished East Coast: Sustainably fished For more information refer to the latest Stock Status report. http://www.daff.qld.gov.au/fisheries/monitoring-our-fisheries/data-reports/sustainability-reporting/stock-status-assessments
Monitoring done in 2013	Commercial logbooks (CFISH), Statewide Recreational Fishing Survey (SWRFS)
Compliance and enforcement	Units inspected by Queensland Boating and Fisheries Patrol (QBFP) in 2013: 6426 including the Gulf of Carpentaria (Commercial vessels: 594, majority of remainder were recreational fishers - private or charter). Offences detected in 2013: 590 This equates to compliance rates of 95.5% for commercial fishers and 95% for recreational fishers corresponding to an overall compliance rate of 94.8%.

¹ The 2010 Statewide Recreational Fishing Survey relates to the 12 month period from October 2010 to September 2011.

Complementary management	Fisheries Queensland continues to collaborate with other states on complementary management arrangements to enable a more complete assessment of mud crab stocks. The Queensland, Northern Territory and Western Australia government officers meet annually at the Northern Australian Fisheries Managers Forum to discuss the management of shared stocks, including those of mud crabs.
Stakeholder engagement	There have been a number of meetings with fishers throughout the east coast of Queensland with Fisheries and the QBFP to discuss various issues within the Fishery.

Mud crab fishery summary

Catch and effort statistics

Commercial

Total catch, effort (days), licences and GVP in the MCF for 2010–13 are reported in Table 1.

Table 1: Commercial fishery catch, effort and GVP in the mud crab fishery 2010–2013 (Source: Fisheries Queensland CFISH Database, 20 June 2014).

	2010	2011	2012	2013
Total catch (t)	1240	1439	1450	1351
Total effort (days)	40 977	43 127	45 716	45 028
Licences (active)	385	388	388	384
GVP (\$A million)	\$19.8	\$23	\$23.2	\$21.6

Commercial catch and catch rates (kg/day) remained high in 2013 when reviewing the ten year period (Figure 2).

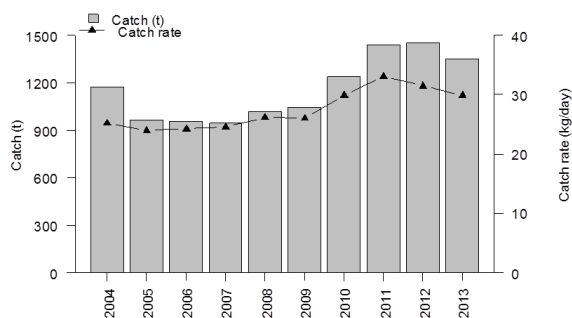


Figure 2: Total commercial catch (in tonnes) and nominal catch per unit effort (kg/day) of mud crabs in the Queensland MCF, 2004–13 (Source: Fisheries Queensland CFISH Database, 27 June 2014).

East Coast

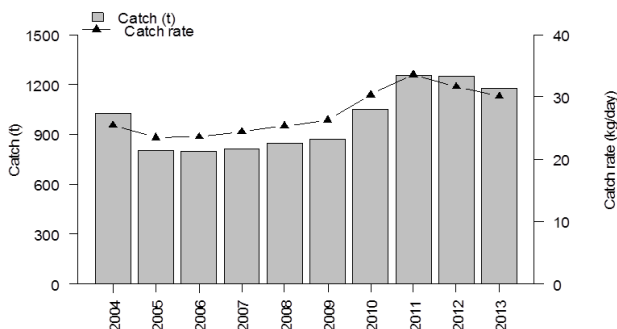


Figure 3: Total commercial catch (t) and catch per unit effort (kg/day) of mud crabs from the east coast of Queensland, 2004–2013 (Source: Fisheries Queensland CFISH database, 27 June 2014).

In 2013, the catch and catch rate of mud crabs on the east coast was lower than 2012; however both remain high in comparison to the previous decade.

The annual reported commercial mud crab catch for the east coast decreased from 1251 t in 2012 to 1177 t in 2013 (Figure 3). The number of licences operating in the fishery (330) increased by one licence from last year but remains low compared to the preceding decade (average of 367). However, the number of days fished per year by the fleet still remains high in 2013 (39 013 days) when compared to 2009 levels (33 032 days).

Gulf of Carpentaria

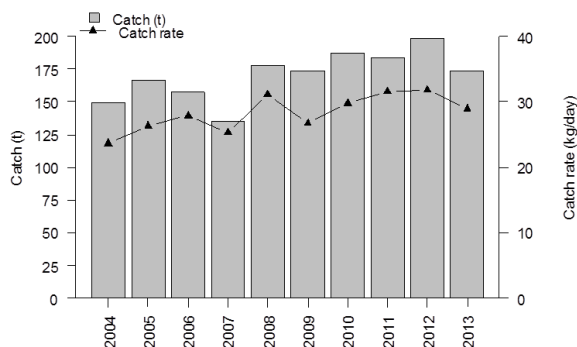


Figure 4: Total commercial catch (t) and catch per unit effort (kg/day) of mud crabs from the Gulf of Carpentaria, 2004–2014 (Source: Fisheries Queensland CFISH database, 27 June 2014).

The Gulf of Carpentaria typically contributes only a small proportion to the total commercial harvest of mud crabs in Queensland. In 2013 (as in 2012), the Gulf of Carpentaria contributed 13% to the total commercial harvest. The annual reported commercial mud crab catch for the Gulf of Carpentaria decreased from 199 t in 2012 to 174 t in 2013 (Figure 4). The catch rate remains relatively steady since 2009 (Figure 4). There were 62 licences recording catch in the Gulf of Carpentaria in 2013.

Regions

In 2013, as in 2012, East Coast South-Central and East Coast Central regions (see Figure 1 for locations) recorded the highest catches with 38% and 19% respectively. Table 2 presents catch from all of the regions for 2013. The East Coast South-Central region increased nearly 10% since last year, while East Coast Central remained the same.

Table 2: Regional catch in the commercial mud crab fishery in 2013 (Source: Fisheries Queensland CFISH Database, 20 June 2014).

Region	Weight (t)	% of total catch	# of licences	Days
EC South-Central	509	38	129	14291
EC Central	254	19	66	6086
EC South	188	14	79	8666
GOC South	165	12	50	5427
EC North	113	8	53	4509
EC North-Central	111	8	57	5315
GOC North	8	1	12	583
EC Far North	2	<1	6	146

Charter

The charter component of the Mud Crab Fishery represents the smallest portion of the total 2013 mud crab harvest with a reported catch of 331 kg, of which 19 kg were released. The Gulf of Carpentaria recorded the majority of this catch (86%). However, charter logbooks are not a mandatory requirement of charter operators operating in estuarine and near shore habitats and therefore logbook data underestimate actual charter catch and effort.

Recreational

The statewide recreational harvest of mud crabs is less than the commercial harvest. In 2010, recreational fishers harvested 366 t (11% RSE²) compared to 662 t (11% RSE) in 2000. Overall, there is a state-wide trend of falling recreational fishing participation rates and changes in fishing preferences.

²To access the 2010 Statewide Recreational Fishing Survey, refer to http://www.daff.qld.gov.au/28_18273.htm Recreational harvest numbers presented in this report include an indication of the mathematical reliability of the estimate (relative standard error (RSE)). Less than 25% RSE is considered reliable.

Performance against fishery objectives

The Performance Measurement System (PMS) functions as a reporting framework that is a transparent, defensible set of criteria for evaluating the performance of the fishery against management objectives. The full PMS for the Mud Crab Fishery including the links between the objective, indicators and performance measures can be found at

http://www.daff.qld.gov.au/28_11060.htm

In 2013, one performance measure triggered (2a) according to the PMS framework. (Table 3 below). Fisheries Queensland Harvest Management was consulted on the results of the performance measures, and no management response is considered necessary at this time to address the triggered performance measures. Increases in catch and catch rates in the Mud Crab fishery may be attributed to the flow on effect of wet weather experienced in coastal areas of Queensland during 2011 and 2012. Fishers reported another good crabbing season following on from these years.

Table 3: Performance measures and outcomes for the Mud Crab Fishery in 2013.

Performance measure	Performance
<i>Target species</i>	
1a. Annual commercial standardised pot catch rate falls outside the upper or lower deciles ³ for the east coast, Gulf of Carpentaria and specified regional divisions.	1. <i>Not measured</i>
1b. A consecutive increase or decrease in commercial standardised pot catch rate over the preceding five years for the east coast, Gulf of Carpentaria and specified regional divisions.	
2a. Annual commercial pot total catch falls outside the upper or lower deciles for the east coast, Gulf of Carpentaria and specified regional divisions.	<p>2a. <i>Triggered (above reference point)</i></p> <ul style="list-style-type: none"> • East Coast Total • East Coast Central • East Coast South • East Coast South-Central <p><i>Triggered (below reference point)</i></p> <ul style="list-style-type: none"> • East Coast Far North <p><i>Not Triggered</i></p> <ul style="list-style-type: none"> • East Coast North-Central • East Coast North • Gulf of Carpentaria Total

³ The upper and low deciles were calculated from the mean and standard deviation of the ten year data period (2000–2009), using a standard statistical formula.

Performance measure	Performance
<p>2b. A consecutive increase or decrease in commercial pot total catch over the preceding five years for the east coast, Gulf of Carpentaria and specified regional divisions.</p>	<ul style="list-style-type: none"> • Gulf of Carpentaria North • Gulf of Carpentaria South <p><i>Management Response to 2a:</i></p> <p>The regions that triggered above the reference point reflect high catches that may be attributed to recent high rainfall years. There was only one region that triggered below the reference point. This region recorded the smallest catch reporting less than 1 % of the total catch in 2013. There are very few licences operating in this region (only 6 of the 384 licences in 2013 reported catch in this region) and as such catch and effort can be very low (see Table 2 above). As a result, no management action is required for the above triggers.</p> <p>2b. <i>None Triggered</i></p>
<i>Bycatch and protected species</i>	
<p>The review of the Mud Crab Fishery ERA indicates any bycatch category requires a Level Two Productivity Susceptibility Analysis.</p>	<p><i>Not measured</i></p> <p>No ERA was conducted during 2012.</p>
<p>1. Percentage of protected species released alive falls below 90%.</p> <p>2. The review of the Mud Crab Fishery ERA indicates any protected species category requires a Level Two Productivity Susceptibility Analysis.</p>	<p>1a. <i>Not triggered</i></p> <p>The Mud Crab Fishery reported interacting with one turtle in 2013, which was released alive.</p> <p>1b. <i>Not measured</i></p> <p>No ERA was conducted during 2013.</p>
<i>Social</i>	
<p>The rate of compliance falls below 92.5% in the commercial fishery and/or 92.5% in the recreational fishery.</p>	<p><i>Not triggered</i></p> <p>95.5% - commercial fishers</p> <p>95% - recreational fishers</p>

Species of conservation interest (SOCI) interactions

The Mud Crab Fishery reported interacting with one turtle in 2013, which was released alive.

Compliance statistics

Compliance and enforcement in the Queensland Mud Crab Fishery are the responsibility of the Queensland Boating and Fisheries Patrol (QBFP). A breakdown of the compliance statistics for 2013 is reported in Attachment 1. During 2013, 6426 units, including 594 commercial fishing vessels, were inspected in the fishery. A total of 590 offences were detected during the course of these inspections corresponding to a compliance rate of 94.8% on units inspected. This compliance rate corresponds to 95% for the recreational sector and 95.5% for the commercial sector.

It should be noted that 54 prosecution offences recorded here are still pending. These related to the commercial sector comprising of 26 operators. In 2013, 807 non-compliant mud crab pots were seized for which no owner could be identified.

Education forms an important component of the compliance strategy for all of Queensland's fisheries. QBFP are proactive in their education programs which include attending events, such as boating and fishing shows and Seafood Industry events, to liaise with fishers, delivering lectures, utilising various forms of media to release important information, answering enquiries and conducting extensive one on one education with both commercial and recreational fishers during the course of field patrols and inspections. During inspections officers hand out recreational fishing guides and flyers which contain information on size and in-possession limits and answer queries from commercial fishers on an ad hoc basis. Education plays a particularly important role when new legislation is implemented and QBFP make every effort to ensure that all

fishers have a good understanding of their rights and responsibilities.

Information complied by

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Front cover image

Mud Crab (*Scylla serrata*)

Attachment 1. Mud Crab Fishery offences in 2013

Offences	Caution	FIN	Prosecution
Commercial fisher take/possess up to 3 fish reg by size or up to 3 fish more than the reg no.	3	1	-
Conduct charter fishing without charter licence/undertake commercial fishing while authority suspended (was F031)	2	1	-
Contravene a condition of an authority involving boat marks	5	2	-
Contravene a condition of an authority involving use of fishing apparatus	8	1	-
Contravene a regulated fishing apparatus declaration (rec fisher)	102	42	-
Fail to produce a document required to be available for immediate inspection (was F035)	4	6	-
Interference with aquaculture activity or fishing apparatus (was F032)	9	27	-
Rec fisher contravenes a regulated waters declaration	1	-	-
Rec fisher take/possess regulated fish	35	96	-
Recreational fisher take or possess regulated fish.	52	102	-
Take/attempt to take FW fish from stocked impoundment with line/set line without a SIP (was F030)	1	-	-
Carried out development without resource allocation authority	-	1	-
Commercial fisher take/possess regulated fish	-	3	-
Fail to give required information to the Chief Executive in stated way or by stated time	-	1	-
Fail to obtain or keep required information in the approved form	-	3	-
Owner/master operate recreational ship not registered	-	1	-
Attempted to commit an offence	-	-	1
Contravened a condition of an authority	-	-	3
Did an act only an authority holder can do	-	-	3
Did not obey signal	-	-	1
Did not produce documents immediately	-	-	1
Fail to comply with regulated fishing apparatus or declaration	-	-	15
Failed to comply with an information requirement	-	-	4
Interfere with an aquaculture activity or apparatus	-	-	5
Obstructed an inspector	-	-	2
Provided false or misleading information	-	-	1
Take/possess/sell fish regulated by form	-	-	2
Take/possess/sell fish regulated by gender	-	-	18
Take/possess/sell fish regulated by number	-	-	4
Take/possess/sell fish regulated by size	-	-	21

