# Sustainable Fisheries Strategy 2017-2027

Gulf of Carpentaria Inshore Fin Fish Fishery Scoping Study



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# Summary

Feature	Details
Species targeted	<i>Commercial</i> —Barramundi, king threadfin, blue threadfin, tropical shark and grey mackerel.
Fisheries symbols	Net fishing         N3—Set mesh net         N11—Small mesh netting         N12—Set mesh net         N13—Set mesh net
Fisheries Legislation	Fisheries Act 1994; Fisheries (General) Regulation 2019; Fisheries (Commercial Fisheries) Regulation 2019; Fisheries Declaration 2019
Working Group	No
Harvest Strategy	No
Gear	<ul> <li>The following apparatus are currently permitted for use within the Gulf of Carpentaria Inshore Fin Fish Fishery:</li> <li>Large mesh set gillnets</li> <li>Small mesh gillnets</li> <li>Cast nets</li> <li>Scoop net</li> <li>For a full description of the types of apparatus prescribed for each fishery symbol refer to the Fisheries (Commercial Fisheries) Regulation 2019.</li> </ul>
Main management methods	<ul> <li>Commercial only</li> <li>Permanent and seasonal spatial closures</li> <li>Minimum and maximum size limits</li> <li>No-take species</li> <li>Gear restrictions</li> <li>Limited Access</li> <li>Vessel &amp; tender restrictions</li> </ul>
Quota	50t TACC applies to the hammerhead shark complex.
Fishing Season	1 January to 31 December Barramundi closures apply to all fishers from midday on 7 October to midday on 1 February every year
Commercial Fishery Symbols	Number of Net symbols—N3 = 85; N12 = 3; N13 = 1; N11 = 281.* Number of charter operations—351 state-wide. *N11 can be used on both the Queensland east coast and in the Gulf of Carpentaria. Symbol numbers correct as of 1 July 2017

Total annual harvest	Commercial: 1939t
GVP	\$15.6 Million
Stock Status	Appendix C
Approvals under the <i>EPBC Act</i> (Part 13 & 13A)	Part 13: Accredited Part 13A: Declared Wildlife Trade Operation (expires 18 March 2022)

# 1 Overview

### 1.1 Commercial Fishery

The *Gulf of Carpentaria Inshore Fin Fish Fishery* (GOCIFFF) extends from Slade Point near the tip of Cape York Peninsula westward to the Queensland – Northern Territory border and operates in all tidal waterways. A net-only fishery, operators target a wide range of species including barramundi, grey mackerel, king threadfin, blue threadfin, and tropical sharks (primarily whaler sharks) at varying depths.

Due to the similarities in fishing methods and target species, the GOCIFFF is frequently compared to the net sector of the East Coast Inshore Fin Fish Fishery (ECIFFF). The GOCIFFF though is much smaller in terms of licence numbers and annual catch and effort levels. The licencing system used in the GOCIFFF is also simpler; consisting of just four fishery symbols (N3, N11, N12 and N13) compared to 17 in the ECIFFF (Department of Agriculture and Fisheries, 2019). Of the GOCIFFF symbols in operation, the majority of catch and effort is reported against the N3 fishery symbol. This symbol operates in estuarine and foreshore waters out to a 7nm limit. The fishing area of the N12 fishery symbol is based further offshore and is restricted to waters between the 7nm limit and the boundary of the Australian Fishing Zone (AFZ). The fishing area of the N13 fishery symbol is more restrictive with operators not permitted to fish within 25nm of the Queensland coastline (Appendix A).

In addition to the fishing area, there are key nuances between the gear permitted for use under each symbol (Appendix B) and the primary target species. N3, N12 and N13 operations are all permitted to target barred javelin, black jewfish, blue threadfin, king threadfin, queenfish and scaly jewfish. However, only N3 operators can actively fish for or target barramundi. Similarly only N12 and N13 operators are permitted to target shark, other than white shark, sand tiger / grey nurse shark or speartooth shark. Outside of these species, GOCIFFF operations are permitted to retain a wide range of fin fish species except for barramundi in the N12/N13 fishery and any regulated coral reef fin fish species (Appendix B).

The fourth fishery symbol, the N11 or small mesh net fishery, differs from the other net symbols in that it can be used on both the Queensland east coast and in the Gulf of Carpentaria. While the N11 is the most numerous net symbol, it makes only a minor contribution to annual GOCIFFF catch and effort levels. N11 operations are limited to the use of cast, mesh scoop or seine nets and the symbol is subject to more stringent restrictions on mesh size and net length (Appendix B). Species permitted to be retained for sale under the N11 symbol include garfish, mullet and other fin fish, excluding barramundi and regulated coral reef fin fish (Appendix B).

### 1.2 Non-commercial Fishing

As the GOCIFFF is a net-only fishery, it does not have a corresponding recreational or charter fishing sector. However, both recreational and charter fishing occurs in the Gulf of Carpentaria with the *Statewide Recreational Fishing Survey 2013–14* (Webley *et al.*, 2015) identifying mullet, javelin, barramundi, threadfins and tropical snappers as some of the more abundantly harvested species. A number of these species are susceptible to capture in the GOCIFFF; particularly the N3 fishery that operates in estuarine and nearshore environments.

In addition to the commercial fishing sector, GOCIFFF species will be harvested by Aboriginal peoples and Torres Strait Islander peoples. Data on catch and effort levels for Aboriginal peoples and Torres Strait Islander peoples in the Gulf of Carpentaria is limited and the sector is considered the least understood. However, DAF anticipates that this sector has comparatively low levels of effort with teleost catch compositions aligning closely with the recreational fishing sector.

Additional information on the *Queensland Statewide Recreational Fishing Survey* is available at: <u>https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-our-fisheries/recreational-fisheries/statewide-and-regional-recreational-fishing-survey</u>.

# 2 Legislation & Advisory Bodies

The GOCIFFF is managed in accordance with the broader objectives of the *Fisheries Act 1994* and its subordinate legislation. The harvest of some species including grey mackerel, sharks and rays are also managed through the *Queensland Fisheries Joint Authority* (QFJA). The QFJA includes representatives from the Commonwealth and Queensland Governments and the body is responsible for the management of the GOCIFFF, the Gulf of Carpentaria Line Fishery and the Gulf of Carpentaria Developmental Fin Fish Trawl Fishery in the areas fished adjacent to Queensland state waters (Australian Fisheries Management Authority, 2017).

Prior to 2011, the GOCIFFF was managed through the *Fisheries (Gulf of Carpentaria Inshore Fin Fish) Management Plan 2009.* In November 2011, the Management Plan was repealed and the management strategy consolidated into the broader *Fisheries Regulation 2008.* Since this has been repealed, the GOCIFFF is now managed under subordinate legislation of the *Fisheries Act 1994* including *Fisheries (Commercial Fisheries) Regulation 2019, Fisheries (General) Regulation 2019, and Fisheries Declaration 2019.* While the fishery does not operate under a management plan, the *Queensland Sustainable Fisheries Strategies* (the Strategy) identifies the development of harvest strategies as one of the major areas of reform (Department of Agriculture and Fisheries, 2017; 2018). The development of harvest strategies will be largely driven through Fisheries Working Groups (FWG) established under the Strategy. These groups include a wide range of stakeholders from the scientific community, management agencies, conservation groups and the commercial and recreational fishing sectors.

# 3 Key Management Controls

The management regime for GOCIFFF relies heavily on input controls to restrict catch and effort with a limited licencing policy, gear restrictions, spatial closures and seasonal closures all used in the fishery. A 14m maximum boat length restriction applies to the N3 fishery symbol with this length increasing to 20m and 25m for the N11 and N12/13 fishery symbols respectively. While gear restrictions apply to all net operations, rules governing the use of the N3 fishery symbol are more complex (Appendix B). This increase in regulation is primarily due to a) N3 fishers operating in a wider array of environments (*e.g.* creeks, rivers and nearshore waters) and b) the need to manage effort targeted at key species or species complexes (Appendix A). For example, provisions relating to the use of an N3 fishery symbol in offshore waters (*i.e.* >2m depth and <7nm from shore) are specifically designed to reduce the impact of the fishery on regional shark and grey mackerel stocks (*pers. comm.* B. Zeller). Evidently, this was one of the reasons why the fishery was subdivided into two separate regions *i.e.* N3 and N12/N13 symbol areas (formally the N9 symbol area) (Appendix A).

With the exception of hammerhead sharks, Total Allowable Commercial Catch (TACC) limits are not used to manage the harvest of target and byproduct species in the GOCIFFF. Given this, output controls used in the GOCIFFF are limited to no-take species, size restrictions (minimum and maximum legal size

limits) and in possession limits for key species or species groupings (*e.g.* mangrove jack, a combined in possession limit of five guitarfish and/or shovelnose rays).

When compared to the Queensland east coast, the system of spatial closures used in the Gulf of Carpentaria is less expansive. The main reason for this is that the Queensland east coast has a more developed system of State and Commonwealth marine parks. This situation changed somewhat on 1 July 2018 when the *North Marine Parks Network* came into effect through Commonwealth legislation and commercial net fishing was prohibited in key sections of the Gulf of Carpentaria (Director of National Parks, 2018). In addition to spatial closures, a seasonal closure applies to the take and targeting of barramundi from midday 7 October to midday 1 February (but possession on boats is allowed until midday 17 October). This closure includes waters throughout the Gulf of Carpentaria and adjoining waterways west and south of the intersection of longitude 142°09'E with the shore at high tide and is applicable to both commercial and recreational fishers.

Refer to the *Fisheries Act 1994* and its subordinate legislation for a full account of the rules governing the use of the N3, N11, N12, and N13 fishery symbols (available at: <u>https://www.legislation.qld.gov.au/</u>). The indigenous sector is also managed in consideration of the *Native Title Act 1993*.

# 4 Assessment History

A comprehensive ERA was completed for all Queensland-managed fisheries in the Gulf of Carpentaria (Zeller & Snape, 2006). This report was based on the Fisheries-Ecological Sustainable Development Reporting Framework (Fletcher *et al.*, 2005) and provides relative risk levels for 47 retained species, 45 non-retained species and 44 general ecosystem components (Zeller & Snape, 2006). This report found that at least two target species were considered to have a high sustainability risk—grey mackerel and guitarfish. A further 16 target (*e.g.* Spanish mackerel, red snappers, barramundi, threadfins, sharks and mud crabs) and non-target (bottlenose dolphins, speartooth sharks and sawfish) species were considered to have a moderate sustainability risk.

Barramundi has been the subject of a two detailed stock assessments, one in 2008 (Campbell *et al.*, 2008) and a more recent assessment focusing specifically on the southern Gulf of Carpentaria stock (Campbell *et al.*, 2017). The southern Gulf of Carpentaria stock is one of two that occur in the region and it produces (on average) over half of Queensland's commercial barramundi harvest. This assessment indicates that while the stock is above critical biomass levels it was below that required to meet Maximum Economic Yield (MEY) and/or the long-term targets outlined in the *Queensland Sustainable Fisheries Strategy 2017–2027* (Campbell *et al.*, 2017).

Outside of barramundi, a detailed stock assessment was undertaken for a number of whaler and hammerhead shark species (Leigh, 2015). The Gulf of Carpentaria was included in the study area and it provided biomass estimates for a number of the species retained for sale in the GOCIFFF. This report generally found that harvest rates for key species were lower than the Maximum Sustainable Yield (MSY) *i.e.* they were being fished sustainably. However, the study also noted concerns about data quality and the availability of data on shark discard rates (Leigh, 2015).

In addition to the stock assessments, a number of the target species including barramundi, grey mackerel, king threadfin, and several shark species have been assigned an indicative sustainability status through the Queensland stock status and *National Status of Australian Fish Stocks* (SAFS) processes (<u>www.fish.gov.au</u>). A full list of the species assessed as part of SAFS or the Queensland Stock Status process has been provided in Appendix C. This list is likely to expand through time as one

of the broader SAFS objectives is to increase the number of species that are subject to stock status assessments.

As the GOCIFFF is export approved, the fishery undergoes broad-scale sustainability assessments as part of the *Wildlife Trade Operation* (WTO) approvals process. A WTO approval is issued under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and is required for all fisheries that export product derived from native species caught and retained in Australian waters. The WTO approval effectively signifies that a fisheries as a whole is being managed sustainably.

Stock assessments undertaken by DAF are publically available through the Departments *Fish Stock Assessment Reports* page (<u>https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-compliance/data/sustainability-reporting/fish-stock-status-reports</u>). Additional information on the stock status assessments of each species can be obtained through the SAFS website (<u>http://fish.gov.au/</u>).

# 5 Licence & Symbol Summary

### 5.1 Commercial fishing authorities / fishery symbols

Access to Queensland's commercial fisheries is managed using fishery symbols. These symbols, in effect, define what gear can be used in each fishery (*e.g.* N = Net, L = line, T = trawl) and the area of operation. While operators can have multiple fishery symbols (*e.g.* N1, N2 and L1 or a L1 and T1) attached to their commercial fishing boat licence, they can only use one fishery symbol at a time. The notable exceptions to this are a) the crab (C1) fishery symbol that can be used in conjunction with a line (L) and net (N) fishery symbol; and b) fishing symbols related to quota such as those used in the Coral Reef Fin Fish Fishery and the East Coast Spanish Mackerel Fishery. In each fishery, the total number of symbols represents the number of fishers that could potentially access the fishery at any given time. This differs from data on the number of 'active' licences which represents the number of operators that have used their symbol to access the fishery at some point over a 12 month period.

While operators can access the GOCIFFF using all four net symbols, the majority of the catch and effort is reported from large mesh net fisheries (N3, N12, N13). As these fisheries account for the majority of the reported catch and effort and they are viewed as the **primary net** endorsements (Table 1; Fig. 1). The remainder of the net symbols belong to the small mesh net fishery (N11) which operates on both the Queensland east coast and in the Gulf of Carpentaria. While the small mesh net fishery has more symbols than the N3, N12 and N13 combined (Table 1), it has a vastly different risk profile. This fishery tends to have smaller catches, is more localised and targets smaller species with a strong capacity to rebound after potential decline. This sub-fishery also makes a smaller contribution to the overall GOCIFFF catch and effort. Given these factors, the N11 is viewed as **secondary net** endorsements and it should not be given equal status to the N3, N12 or N13 fisheries.

### 5.2 Trends in commercial fishing authorities

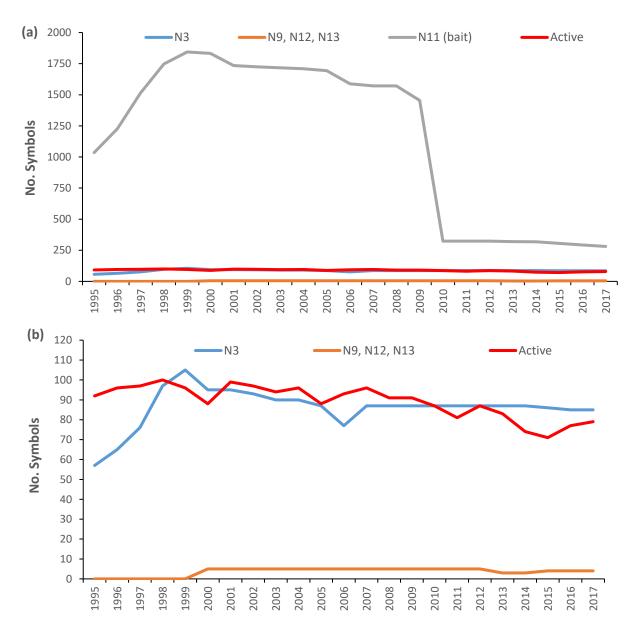
The total number of fishing symbols able to access the GOCIFFF has declined through time. These declines are driven largely by the number of N11 (small mesh net) symbols that reduced from a statewide peak of 1832 (2000) to less than 400 (Table 1, Fig, 1a). In contrast, the number of primary net symbols (N3, N12, N13) have declined by around 20% since the pre-2000 period (Table 1, Fig.1b). Part of this decline can be attributed to a number of historical management initiatives that enabled fishers to amalgamate fishery symbols. For example, in order to access the now superseded N9 fishery operators were required to surrender two N3 fishery symbols (Department of Primary Industries, 2004).

**Table 1.** An overview of the total number of net (N) fishery symbols that can potentially access the GOCIFFF, and the number of active licences. Total active licences are non-cumulative over the five symbols as operators may report catch from multiple categories e.g. the N3 and N11.

			No. Symbo	ols			
Year		Prii	mary		Secondary	Total	Active licences
	N3	N9**	N12	N13	N11*		licences
1995	57	-	-	-	1035	1092	92
1996	65	-	-	-	1227	1292	96
1997	76	-	-	-	1515	1591	97
1998	97	-	-	-	1748	1845	100
1999	105	-	-	-	1844	1949	96
2000	95	5	-	-	1832	1932	88
2001	95	5	-	-	1735	1835	99
2002	93	5	-	-	1724	1822	97
2003	90	5	-	-	1717	1812	94
2004	90	5	-	-	1709	1804	96
2005	87	5	-	-	1694	1786	88
2006	87	5	-	-	1588	1670	93
2007	87	5	-	-	1571	1663	96
2008	87	5	-	-	1571	1663	91
2009	87	5	-	-	1454	1546	91
2010	87	5	-	-	323	415	87
2011	87	5	-	-	323	415	81
2012	87	5	-	-	323	415	87
2013	87	-	3	-	319	409	83
2014	87	-	3	-	318	408	74
2015	86 -		3	1	305	395	71
2016	85	-	3	1	292	381	77
2017	85	-	3	1	281	370	79

\* Data includes N6 and N7 fishery symbols which were superseded by the N11 fishery symbol as part of a broader management reform process targeted at net fishing operations on Queensland east coast. \*\* The N9 was phased out subsequent to the 2009–11 GOCIFFF review.

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**Figure 1.** Comparisons between the total number of net symbols able to access the GOCIFFF and the number of active licences: (a) including data on the number of N11 fishery symbol and (b) excluding data on the number of N11 symbols (Table 1).

The number of licences accessing the fishery (*i.e.* the number of active licences) has declined by approximately 20% since the pre-2000 period (Table 1). As catch is assigned to method and not fishery symbol it is difficult to ascertain what proportion of this decline can be attributed to the reduced number of N11 symbols (Fig. 1a). However, the relative closeness between the number of primary (N3, N12 and N13) symbols and the number of active licences suggests that a high percentage of these symbols are used in the fishery. It is noted though that the monitoring systems used by DAF classifies any licence as 'active' if the operator has reported catch from that fishery in a given year; irrespective of the size of the catch or the fishing frequency.

Without management intervention, the number of fishing symbols available for use in the GOCIFFF is expected to remain at or around 2017 levels (Table 1, Fig. 1a). This is primarily because Queensland

operates under a limited entry policy that prevents new licences being issued for the fishery. While this does not prevent the re-activation of underutilised licences, it will prevent licence numbers expanding into the future. DAF anticipates that the total number of GOCIFFF symbols will continue to decline through time due to natural attrition (*i.e.* surrenders).

# 6 Commercial Catch & Effort

# 6.1 Effort

The number of days fished in the GOCIFFF peaked in 2001 before the fishery experienced a period of progressive declines that resulted in effort reducing by over 30% (Table 2). Given the timing of the declines, particularly in 2011, it is likely that management reform processes contributed to this reduction. These declines stabilised in 2013 and effort has trended upwards since 2015 (Table 2; Fig. 2a). This increase can be partly attributed to a corresponding increase in the number of licences that are operating in the fishery (Table 1).

Over the last 10 years, effort levels in the GOCIFFF have fluctuated at and around 9,000 days fished (range = 6901-10,173 days fished). This is well below that reported in the net sector of the ECIFFF where the annual effort ranges from 16,000 to 27,000 days fished (2008–2017 data). This discrepancy largely relates to the GOCIFFF having fewer fishing symbols and a smaller number of active net licences (2017 data: GOCIFFF = 79 active net licences; ECIFFF = 273 active net licences) (Fig, 2b).

### 6.2 Effort distribution

Effort in the GOCIFFF is dispersed across the southern and eastern coastlines of the Gulf of Carpentaria. The majority of effort is concentrated in the south eastern region of the Gulf of Carpentaria and along the northern coastline *i.e.* waters adjacent to Weipa (Appendix D). Effort maps for 2015, 2016 and 2017 indicate that all of the effort is utilised in areas managed under N3 and N12 fishery symbols (Appendix D).

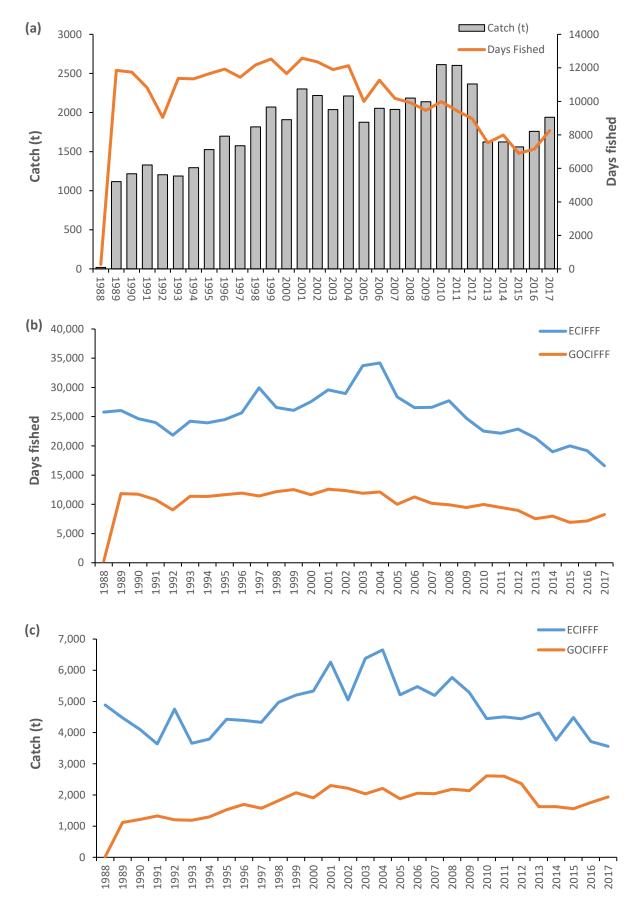
# 6.3 Catch

Data for the GOCIFFF shows that total catch increased gradually from around 1500t in 1991 to 2600t 2011 (Table 2, Fig. 2a) before stabilising at around 2000–2300t per year. After which, there is a notable decline in the amount of product being retained in this fishery. This decline mirrors trends observed in the effort data and will be influenced by a range of factors including the aforementioned changes to management, economic or operational constraints (*e.g.* increased overheads, declining services and infrastructure) and environmental factors. For example, research has shown that annual rainfall and water flows exert considerable influence on the recruitment rates of barramundi (Halliday *et al.*, 2007; Campbell *et al.*, 2017) and on the health of habitats used as nursery areas for a number of the commercial species.

As with the effort data, the total annual catch in the GOCIFFF was lower than the ECIFFF (Fig. 2c). This differential can be largely attributed to the elevated catches of mullet, bream, flathead and whiting on the Queensland east coast. In the case of mullet, the overwhelming majority of this product (1613t in 2017) is retained in the ocean beach fishery that operates in south east Queensland (Department of Agriculture and Fisheries, 2019). A fishing sector analogous to the ocean beach fishery does not exist in the GOCIFFF.

	W	/hole Fishe	ry						Cat	ch (t) of I	Key Spec	ies					
Year	Effort	Catch	CPUE (kg/day)	Mackerel - grey	Barramundi	Threadfin - king	Shark - Australian blacktip	Blacktip whaler shark	Threadfin - blue	Mackerel - Spanish	Fish - unspecified	Jewel	Shark - C. sorrah	Hammerhead shark	Queenfish - unspecified	Grunter - unspecified	Shark - unspecified
1996	11929	1697	142.3	241	556	295	-	-	92	16	34	23	-	-	15	22	346
1997	11435	1575	137.7	376	452	245	-	-	54	11	27	12	-	-	15	16	319
1998	12174	1817	149.3	370	572	336	-	-	71	15	25	19	-	-	16	13	344
1999	12527	2071	165.3	308	723	428	-	-	123	21	24	16	-	-	13	26	360
2000	11656	1909	163.8	419	611	318	-	-	40	25	27	22	-	-	9	16	390
2001	12576	2301	183.0	471	723	473	-	-	67	21	52	33	-	-	15	25	373
2002	12355	2217	179.5	345	744	445	-	-	83	24	32	48	-	-	26	34	391
2003	11895	2038	171.3	379	551	296	-	-	106	18	53	51	-	-	23	31	474
2004	12123	2211	182.4	468	615	310	3	-	126	29	30	52	1	-	35	51	366
2005	9995	1876	187.7	394	500	283	1	-	81	33	33	33	0	-	17	26	396
2006	11263	2054	182.3	490	735	305	74	-	66	33	35	39	-	-	14	19	159
2007	10173	2039	200.5	640	631	248	70	42	59	54	41	38	35	6	22	21	91
2008	9917	2185	220.3	622	726	295	73	103	76	36	38	26	21	10	39	29	47
2009	9464	2137	225.8	482	793	309	118	87	71	32	42	26	18	20	35	19	29
2010	9987	2613	261.7	897	763	378	97	119	63	51	39	30	21	19	53	13	29
2011	9444	2602	275.6	853	966	325	130	60	49	55	43	32	15	9	11	12	12
2012	8961	2365	263.9	767	929	313	95	38	39	50	37	39	16	2	8	11	4
2013	7528	1624	215.8	486	505	176	97	59	40	57	23	38	28	40	7	14	4
2014	7985	1624	203.3	562	457	142	54	69	49	55	25	46	32	45	5	13	3
2015	6901	1560	226.0	718	367	138	59	41	41	40	20	23	22	15	9	11	13
2016	7146	1759	246.1	645	468	169	160	50	54	40	39	20	24	17	20	12	13
2017	8256	1939	234.8	552	668	236	116	75	74	42	41	23	9	5	36	21	15

Table 2. An overview of annual catch and effort statistics for species comprising the bulk of the historical catch in GOCIFFF.

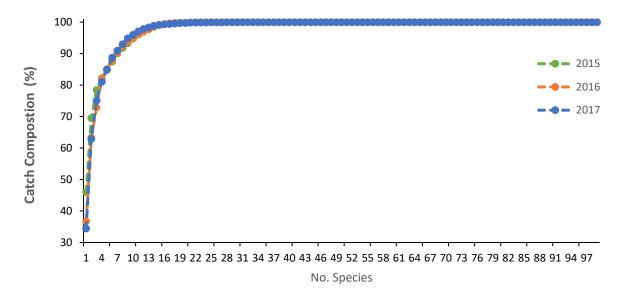


**Figure 2.** Catch and effort summaries for the GOCIFFF (a) catch and effort trends, (b) effort comparisons with the ECIFFF and (c) catch comparisons with the ECIFFF.

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### 6.4 Species Composition

Management arrangements for the GOCIFFF allows operators to retain a diverse array of species providing they are not defined as no-take species for that symbol (Appendix B) or a regulated coral reef fin fish species. This is reflected in the catch composition data with the fishery reporting retained catch from over 100 different species or species complexes (Appendix E). However, the bulk of the catch is made up of a handful of fin fish and shark species. For example, over 90% of the reported catch in 2017 comprised barramundi, grey mackerel, king threadfin, blue threadfin and unspecified shark (Table 2; Fig. 3). Given this, the majority of the remaining species could be classified as byproduct.



*Figure 3.* Catch summary for the GOCIFFF. Cumulative species curve representing the retained catch for 2015, 2016 and 2017.

### 6.5 Bycatch

As GOCIFFF operators retain a wide range of species it can be difficult to draw a distinction between those defined as byproduct and bycatch. This situation is compounded by the fact that the definition of bycatch and byproduct will vary between operators. In most instances, the majority of the bycatch will consist of small teleosts, benthic elasmobranchs and undersized or poor quality target and byproduct species (Halliday *et al.*, 2001). While there is limited data on invertebrate interactions, some species are likely to become entangled within a net as part of the fishing event. This will include crab and squid species that could be retained for sale under previous management regimes (Appendix E).

### 6.6 Species of Conservation Interest

Logbook data reveal few interactions with species of conversation interest (SOCI). Interactions are defined as any physical contact with a protected species, including interactions with fishing gear and vessel collisions. The logged interactions since 2003 include cetaceans, turtles, crocodiles, sawfish and rays, dugongs and sea snakes (Table 3). Appendix F gives the full break down of logged SOCI interactions by species. Sawfish make up the bulk of interactions, with crocodiles and marine turtles also making notable contributions to the total number of interactions in the GOCIFFF. When compared to non-anchored gillnetting, anchored gillnets have a higher proportion of interactions where animals are released dead; 9% vs. 42%.

**Table 3.** Summary of interactions reported in the Species of Conservation Interest (SOCI) logbook by fishers operating in the Gulf of Carpentaria Inshore Fin Fish Fishery (GOCIFFF). Data includes all records encompassing Gillnetting and Anchored Gillnetting fishing operations. \*Relates to species that are subject to additional reporting requirements.

								Year								
Species	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
Whales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dolphins	0	0	0	0	1	1	0	0	0	0	0	0	0	3	0	5
Marine turtles	2	1	5	2	10	0	0	9	2	1	0	0	0	7	1	40
Sharks*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sawfishes & Rays*	4	40	24	0	21	12	15	129	20	2	38	4	7	70	9	395
Crocodiles	7	1	0	0	1	10	8	0	3	5	1	0	0	15	27	78
Seabirds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sea snakes	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	4
Teleosts	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dugongs	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Syngnathids	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-SOCI reports	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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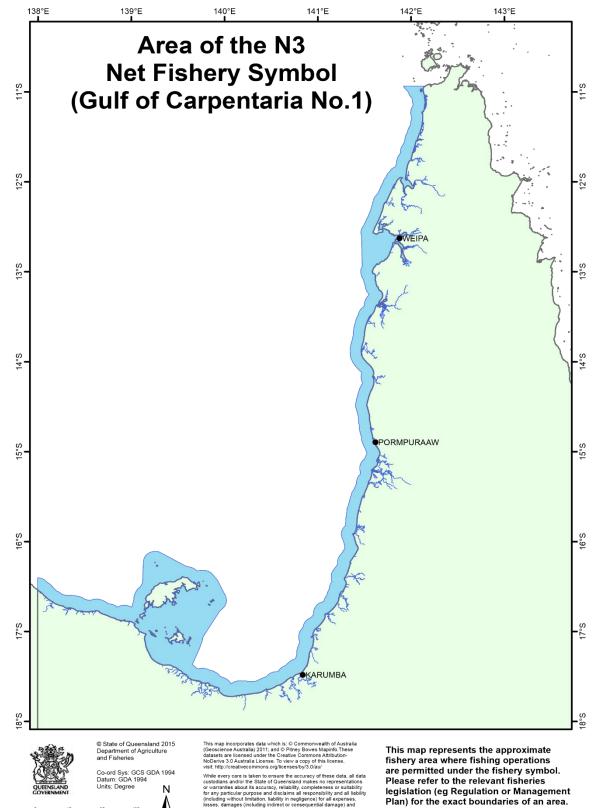
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# 8 Appendix

- Appendix A—Fishing area boundaries for key net fishing symbols used in the GOCIFFF.
- Appendix B—Summary of key provisions used to govern net fishing symbols in the GOCIFFF.
- Appendix C—Summary of the species assessed as part of the QLD stock status and SAFS processes.
- Appendix D—Effort distribution maps for the 2015, 2016 and 2017.
- Appendix E—Complete overview of the GOCIFFF catch from 1990–2017 inclusive.
- Appendix F—Detailed overview of the SOCI interactions reported from the GOCIFFF.

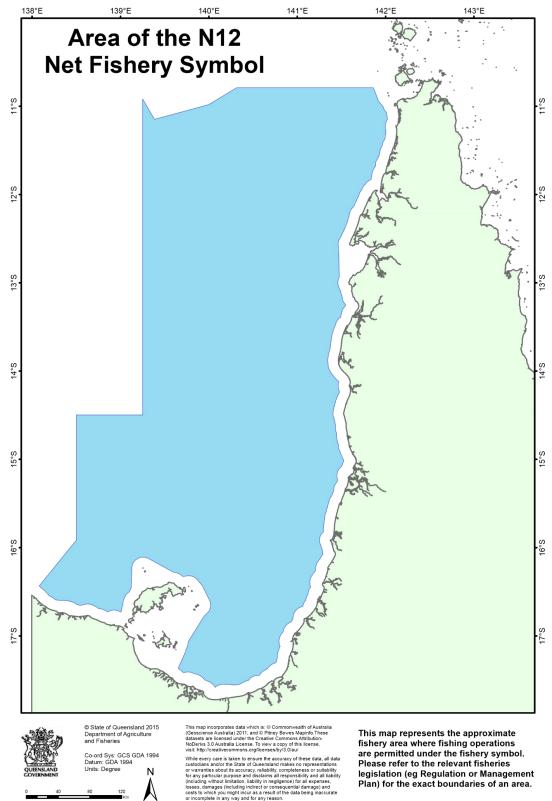


**APPENDIX A**—Fishing area boundaries for the fishery symbols (N3, N11, N12, N13) permitted for use in the Gulf of Carpentaria Inshore Fin Fish Fishery (GOCIFFF).

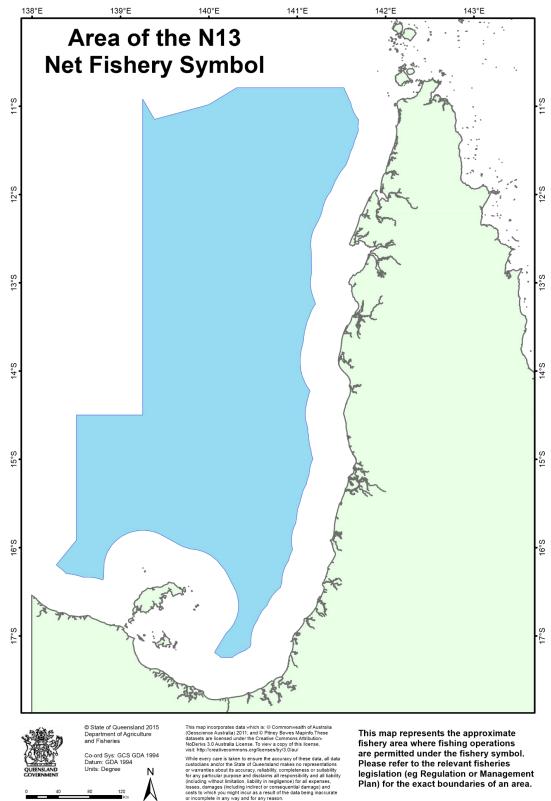
138°E 139°E 140°E 141°E 142°E 143°E Area of the N11 **Net Fishery Symbol** 11°S 11°S (small mesh net) 12°S 12°S WEIPA 13°S 13°S 14°S 14°S PORMPURAAW 15°S 15°S 16°S 16°S 17°S 17°S KARUMBA © State of Queensland 2015 Department of Agriculture and Fisheries corporates data which is: © Commonwealth of Aus Australia) 2011; and © Pitney Bowes Mapinfo.Th licensed under the Creative Commons Attribution ) Australia License, To view a copy of this license, This map represents the approximate fishery area where fishing operations are permitted under the fishery symbol. 3.0 / ons.org/li Co-ord Sys: GCS GDA 1994 Datum: GDA 1994 every care is taken to ensure the accuracy of these data. Jians and/or the State of Queensland makes no represent Please refer to the relevant fisheries Queensland makes no rop-y, reliability, completeness of disclaims all responsibility ar bility in negligence) for all ex lirect or consequential dama; Units: Degree Ν legislation (eg Regulation or Management Plan) for the exact boundaries of an area. ess or sui

APPENDIX A cont.—Fishing area boundaries for the fishery symbols (N3, N11, N12, N13) permitted for use in the Gulf of Carpentaria Inshore Fin Fish Fishery (GOCIFFF).

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**APPENDIX A cont.**—Fishing area boundaries for the fishery symbols (N3, N11, N12, N13) permitted for use in the Gulf of Carpentaria Inshore Fin Fish Fishery (GOCIFFF).



**APPENDIX A cont**.—Fishing area boundaries for the fishery symbols (N3, N11, N12, N13) permitted for use in the Gulf of Carpentaria Inshore Fin Fish Fishery (GOCIFFF).

**APPENDIX B**—Summary of the provisions relating to each of the key net fishing symbols permitted for use in the Gulf of Carpentaria Inshore Fin Fish Fishery (GOCIFFF).

#### N3 Fishery Symbol Netting Provisions

#### Target species

Only the following fish may be taken under the (N3 fishery symbol) licence— (a) barramundi; (b) barred javelin; (c) black jewfish; (d) blue threadfin; (e) king threadfin; (f) queenfish; (g) scaly jewfish; (h) other fin fish, excluding regulated coral reef fin fish, if the fish are taken while taking fish mentioned in paragraphs (a) to (g).

#### Use of a Net

- 1) Fish may be taken only by using a set mesh net.
- 2) A power assisted device may be used with a set mesh net.

#### General restrictions on use of set mesh nets

- 1) A set mesh net must not be used
  - a) in a marked navigation channel; or
  - b) within 400m of a jetty or wharf; or
  - c) across a waterway or navigation channel so that—
    (i) its ropes make the waterway or navigation channel impassable to a boat; or
    (ii) the net extends to more than one-half of the width of the waterway or navigation channel where the net is used.
- 2) A reference in subsection (1) to using a set mesh net across a waterway or navigation channel includes using more than 1 set mesh net in a line across the waterway or navigation channel, regardless of the distance between the nets.
- 3) A set mesh net must not be used within 100m of any other net that is in use.
- 4) Despite subsection (3), a person using more than 1 set mesh net other than in a river or creek may set the nets within 100m of each other.
- 5) If a set mesh net is used in a river or creek, no other net may be used at the same time other than in a river or creek.

#### Use in a river or creek

- 1) A set mesh net may be used in a river or creek only if the set mesh net
  - a) is no longer than 120m; and
  - b) has a mesh size of at least 160mm but no more than 215mm; and
  - c) has a drop of no more than 50 meshes.
- 2) No more than 6 nets may be set in the river or creek, regardless of the number of fishery symbols 'N3' written on the licence.
- 3) The nets may be set if
  - a) their combined length is no longer than 360m; and
  - b) the distance between the first and last net is no longer than 5n miles.
- 4) A person using a net must be no more than 5n miles from any net the person is using.

#### N3 Fishery Symbol Netting Provisions

- 5) If a power assisted device is on a boat, no more than 360m of the net may be attached to the device.
- 6) If a power assisted device is used, all nets on the boat, other than the net on the device, must be stowed and secured.

#### Use in nearshore waters

- 1) This section applies to the use of a set mesh net in nearshore waters.
- 2) A set mesh net may be used only if
  - a) it is no longer than 600m; and
  - b) has a mesh size of at least 160mm but no more than 215mm.
- 3) No more than 6 nets may be set in nearshore waters, regardless of the number of fishery symbols 'N3' written on the licence.
- 4) The nets may be set if
  - a) their combined length is no longer than 600m; and
  - b) the distance between the first and last net is no longer than 6n miles.
- 5) A person using a net must be no more than 6n miles from any net the person is using.
- 6) If a power assisted device is on a boat, no more than 600m of the net may be attached to the device.
- 7) If a power assisted device is used, all nets on the boat, other than the net on the device, must be stowed and secured.

#### Use in offshore waters if 'N3' written on licence only once

- 1) This section applies if the licence has the fishery symbol 'N3' written on it only once.
- 2) A set mesh net may be used in offshore waters only if
  - a) the net is no longer than 300m, whether or not a power assisted device is used; and
  - b) the net has a mesh size of at least 160mm but no more than 165mm; and
  - c) the net's drop is not more than 50 meshes; and
  - d) there are no other nets on the boat; and
  - e) the person using the net remains on a boat floating on the water and within 100m of the net while the net is being used; and
  - f) the net is not used as a bottom set net.

#### Use in offshore waters if 'N3' written on licence more than once

- 1) This section applies if the licence has the fishery symbol 'N3' written on it more than once.
- 2) A set mesh net may be used in offshore waters only if
  - a) the net is no longer than 600m, whether or not a power assisted device is used; and
  - b) the net has a mesh size of at least 160mm but no more than 165mm; and
  - c) the net's drop is not more than 50 meshes; and
  - d) all other nets on the boat are stowed and secured; and
  - e) the person using the net remains on a boat floating on the water and within 100m of the net while the net is being used; and
  - f) the net is not used as a bottom set net

#### N11 Fishery Symbol Netting Provisions

#### Target species

Only the following fish may be taken in the Gulf 'N11' area— (a) garfish; (b) mullet; (c) other fin fish, excluding barramundi and regulated coral reef fin fish, but only if the fish are taken while taking garfish or mullet.

#### Permitted ways of taking fish

- 1) Fish may only be taken in the Gulf 'N11' area—by using cast, mesh, scoop or seine nets.
- 2) However, for taking fish in the Gulf 'N11' area, a power assisted device must not be used with a net.
- 3) (3) A person using a net must be within 100m of it.

#### Net Configuration (cast nets)

Use of cast nets A cast net may be used in the fishery area only if the net— (a) is no longer than 3.7m; and (b) has a mesh size of no more than 28mm.

#### Net Configuration (scoop nets)

A scoop net may be used in the fishery area only if the net— (a) is no more than 2m in each of its dimensions; and (b) has a mesh size of at least 25mm and a handle or shaft no longer than 2.5m.

#### Net Configuration (use of mesh nets in offshore and nearshore waters)

Use of mesh nets in offshore and nearshore waters in the Gulf 'N11' area

- 1) This section applies to using a mesh net in the Gulf 'N11' area.
- 2) A mesh net may be used—
  - (a) in offshore waters, only if it-
    - I. is no longer than 400m; and
    - II. has a mesh size of at least 25mm but no more than 45mm; and

(b) in nearshore waters, only if it-

- I. is no longer than 200m; and
- II. has a mesh size of at least 25mm but no more than 45mm.

#### Net Configuration (use of mesh nets in rivers and creeks)

A mesh net may be used in a river or creek only if the net is— (a) no longer than 200m; and (b) has a mesh size of at least 25mm but no more than 45mm.

#### N12 Fishery Symbol Netting Provisions

#### Target species

Only the following fish may be taken under the (N12 fishery symbol) licence— (a) barred javelin; (b) black jewfish; (c) blue threadfin; (d) grey mackerel; (e) king threadfin; (f) queenfish; (g) scaly jewfish; (h) shark, other than white shark, sandtiger shark or speartooth shark; (i) other fin fish, excluding barramundi and regulated coral reef fin fish, if the fish are taken while taking fish mentioned in paragraphs (a) to (h).

#### Use of a Net

- 4) Fish may be taken only by using a set mesh net.
- 5) A power assisted device may be used with the net only if
  - a) the net is no longer than 1,800m; and
  - b) all other nets on board the boat from which the net is being used are stowed and secured.

#### Net Configuration

- 1) A net may be used (under the N12 fishery symbol) only if
  - a) it is no longer than 1,800m; and
  - b) has a mesh size of at least 160mm but no more than 165mm; and
  - c) its drop is no more than 85 meshes; and
  - d) one end of the net is anchored or fixed to a place;
  - e) the other end of the net is fixed to a boat; and
  - f) it is not used as a bottom set net.
- 2) The line thickness of a net must be at least 0.9mm.

A person using a net must be within 100m of it

#### N13 Fishery Symbol Netting Provisions

#### Target species

Only the following fish may be taken under the (N12 fishery symbol) licence— (a) barred javelin; (b) black jewfish; (c) blue threadfin; (d) grey mackerel; (e) king threadfin; (f) queenfish; (g) scaly jewfish; (h) shark, other than white shark, sandtiger shark or speartooth shark; (i) other fin fish, excluding barramundi and regulated coral reef fin fish, if the fish are taken while taking fish mentioned in paragraphs (a) to (h).

#### <u>Use of a Net</u>

- 6) Fish may be taken only by using a set mesh net.
- 7) A power assisted device may be used with the net only if—(a) the net is no longer than 1,800m; and

(b) all other nets on board the boat from which the net is being used are stowed and secured.

#### Net Configuration

3) A net may be used (under the N13 fishery symbol) only if-

#### N13 Fishery Symbol Netting Provisions

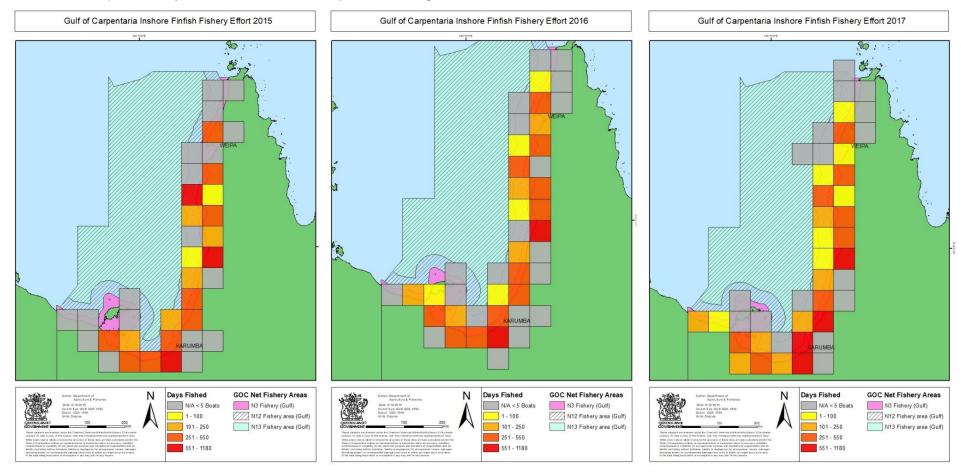
- a) it is no longer than 1,800m; and
- b) has a mesh size of at least 160mm but no more than 165mm; and
- c) its drop is no more than 85 meshes; and
- d) one end of the net is anchored or fixed to a place;
- e) the other end of the net is fixed to a boat; and
- f) it is not used as a bottom set net.
- 4) The line thickness of a net must be at least 0.9mm.
- 5) A person using a net must be within 100m of it

**APPENDIX C**—Summary of the species retained in the Gulf of Carpentaria Inshore Fin Fish Fishery (GOCIFFF) that were assessed as part of the National Status of Australian Fish Stocks (SAFS) and Queensland Stock Status processes. An overview of the stock status assessments is available at: <a href="https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-compliance/data/sustainability-reporting/stock-status-assessment">https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-compliance/data/sustainability-reporting/stock-status-assessment</a>

Species	SAFS Stock name	2015 QLD status	2016 SAFS status	2017 QLD status	2018 SAFS Status
Barramundi	Northern Gulf of Carpentaria	Not Assessed	Sustainable	Not Assessed	Sustainable
Darramunu	Southern Gulf of Carpentaria	Not Assessed	Transitional- depleting	Transitional- depleting	Depleting
King threadfin	Gulf of Carpentaria Qld	Transitional- depleting	Transitional- depleting	Transitional- depleting	Depleting
Blue threadfin	Gulf of Carpentaria Qld	Undefined	Not Assessed	Sustainable	Sustainable
Grey mackerel	Gulf of Carpentaria Qld	Not Assessed	Sustainable	Not Assessed	Sustainable
Black jewfish	Gulf of Carpentaria Qld	Not Assessed	Undefined	Not Assessed	Undefined
Blacktip sharks	Gulf of Carpentaria Qld	Not Assessed	Undefined	Not Assessed	Undefined
Cobia	Gulf of Carpentaria Qld	Undefined	Not Assessed	Sustainable	Not Assessed
Dart	Gulf of Carpentaria Qld	Negligible	Not Assessed	Negligible	Not Assessed
Golden snapper	Gulf of Carpentaria Qld	Not Assessed	Sustainable	Not Assessed	Sustainable
Hammerhead shark ( <i>Sphyrna</i> spp. & <i>Eusphyra</i> sp.)	Gulf of Carpentaria Qld	Not Assessed	Not Assessed	Undefined	Not Assessed

Species	SAFS Stock name	2015 QLD status	2016 SAFS status	2017 QLD status	2018 SAFS Status
Mangrove jack	Gulf of Carpentaria Qld	Undefined	Overfished	Transitional- recovering	Recovering
Javelin	Gulf of Carpentaria	Undefined	Not Assessed	Undefined	Not Assessed
Queenfish	Gulf of Carpentaria Qld	Undefined	Not Assessed	Undefined	Not Assessed
School mackerel	Gulf of Carpentaria	Negligible	Not Assessed	Negligible	Negligible
Tuskfish	Gulf of Carpentaria Qld	Negligible	Not Assessed	Negligible	Not Assessed
Spotted mackerel	Northern Australia	Not Assessed	Sustainable	Not Assessed	Negligible

**APPENDIX D**—Effort distribution for the GOCIFFF for the 2015, 2016 and 2017 fishing seasons. Grey grids represent areas where effort has been reported but information is protected by commercial in confidence provisions i.e. grid contains <5 boats.



											C	atch (	(t)										
Species	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Amberjack							1											0				1	
Bait fish	0	0	0		0	0	0	1	2	2	1	0	1	2	4	0	5	3	3	2	0	1	1
Barramundi	449	556	452	572	723	611	723	744	551	615	500	735	631	726	793	763	966	929	505	457	367	468	668
Blacktip whaler shark													42	103	87	119	60	38	59	69	41	50	75
Bream - black (luderick)		0	0				0			0				2		0	0			0		0	
Bream - bony (herring)		0																					
Bream - butter																				0			
Bream - unspecified	0	0			0			0	0	1	0	0	0	1	0			0					
Catfish - blue													0	0					11				
Catfish - golden	1	2	2	3	0	0	0	2	2	3	2	2	1			1	2	0	0		0	1	0
Catfishes	9	8	7	8	4	4	4	4	4	10	6	6	3	1	4	1	1	0		1	0	0	0
catsharks															0				0	0		0	
Cod - estuary																						0	
Cod - jumping (tripletail)	1	2	2	4	1	1	1	2	2	2	1	1	0	0	0	0	0		0	0		0	0

**APPENDIX E**—The yearly total catch (*t*) for the GOCIFFF 1995–2017<sup>1</sup>. Historical catch includes the species taken under the RL licence, which existed from 1993–2000.

<sup>&</sup>lt;sup>1</sup> Some species are recorded under synonymous names e.g. the accepted name for small mouth nannygai is crimson snapper.

											C	atch (	t)										
Species	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Crab - blue swimmer*			0										0										
Crab - Mud*	1	1	3	1	1	0			1	0	0	1	1	1	0	0	1	1					
Crab - unspecified*												0			0								
Creek whaler													3	0	0	2	0						
Dart - unspecified	0	1	1	0	1	1	0	1		0		0		0									
Fish - unspecified	33	34	27	25	24	27	52	32	53	30	33	35	41	38	42	39	43	37	23	25	20	39	41
Flathead - unspecified				0					0	0	0												
Flounder - unspecified					0						0												
Garfish - unspecified	1	1	0	1	0	1	4	4	1	0	0	1	2	2	2		0	1	1	3	1	0	2
Golden Snapper	2	5	6	2	4	2	8	2	1	0	0	1	3	0	2	2	0	0	2	2	1	0	0
Groper - eastern blue																					0		
Grunter - unspecified	20	22	16	13	26	16	25	34	31	51	26	19	21	29	19	13	12	11	14	13	11	12	21
Guitarfishes - shovelnose unsp					0					1		0	2	5	2	0	0	1	2	14	3	3	2
Hammerhead shark													6	10	20	19	9	2	40	45	15	17	5
Herring - koningsberger's																			0		0		0
Herring - wolf		0																					

			-	-							c	atch (	t)		-						-	-	
Species	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Jew fish - black	2	3	2	2	1	5	1	2	3	5	2	1		0		0	0	0	0	0	0		0
Jew fish - mulloway	7	7	1	0	0	0			0	0					0								
Jew fish - silver	1	1	1	0	3	0	0	0	0	1	0												
Jew fish - unspecified		0	3	2	2	1	1	2	2	3	2	2	7	5	9	8	5	3	4	6	3	14	10
Jewel	26	23	12	19	16	22	33	48	51	52	33	39	38	26	26	30	32	39	38	46	23	20	23
John dory					0	0																	
Kingfish - black	2	3	2	1	1	1	3	3	2	2	3	2	3	2	2	7	7	3	3	6	3	4	2
Kingfish - unspecified		0				0																	
Kingfish - yellowtail			0																				
Leather jacket/triggerfish						0																	
longtoms										0													
Mackerel - grey	122	241	376	370	308	419	471	345	379	468	394	490	640	622	482	897	853	767	486	562	718	645	552
Mackerel - school			1							0	9	0	0	0									
Mackerel - spanish	12	16	11	15	21	25	21	24	18	29	33	33	54	36	32	51	55	50	57	55	40	40	42
Mackerel - spotted									0	0	0	0	0	0	0				0				
Mackerel - unspecified	3	12	8	3	4	9	6	10	0	1	0	0			0	0							0

											C	atch (	t)										
Species	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Mangrove jack	0	0	1	0	0				0		0	1	0					0					0
Milk, Sharpnose & Hardnose Sharks															0								
Milkfish	1									4					1					1			0
morwongs		0								0												0	
Mullet - diamond scale					0	0				0	0	0		0	0		0	0	0	0	0		0
Mullet - fantail/silver			0	0																			
Mullet - sea/flathead	0				0																		
Mullet - unspecified	1	4	3	1	0	2	5	1	8	6	2	2	1	3	4	0	0	1	1	0		0	1
Pilchard/sardine - unspecified		0					1																
Pomfret - unspecified	4	3	6	8	6	5	3	5	10	16	12	6	7	4	7	4	3	1	2	2	1	3	4
Queenfish - unspecified	18	15	15	16	13	9	15	26	23	35	17	14	22	39	35	53	11	8	7	5	9	20	36
Queensland halibut						0	0	0			0												
Rainbow runner				0																			
Ray - blue spotted sting									9														
Ray - eastern fiddler	1	2	0																				
Ray - spotted eagle							0				0	0											

											С	atch (	(t)										
Species	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Ray - sting unspecified			1	0	0	0	2	5	6	2	1	1											0
Redfish																							0
Samson fish					0																		
Scad - unspecified												0											
Shark - australian blacktip	0									3	1	74	70	73	118	97	130	95	97	54	59	160	116
Shark - blue whaler															0							0	0
Shark - bull																1				1			0
Shark - eastern shovel nose										1													
Shark - fins unspecified	0	0	0	0					0														
Shark - fossil														1	0	0	0	0	0	0	0	0	0
Shark - lemon														0					0				
Shark - milk													0	1	0	0	0		1	0	0	1	1
Shark - pigeye														0		0		0	0	0			
Shark - scalloped hammerhead							0			9	2	6	1								0		
Shark - sorrah										1	0		35	21	18	21	15	16	28	32	22	24	9

											С	atch (	(t)										
Species	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Shark - spinner															0	1	1						
Shark - tiger														0		0				0			
Shark - unspecified	475	346	319	344	360	390	373	391	474	366	396	159	91	47	29	29	12	4	4	3	13	13	15
Shark - whaler unspecified										55	36	48	8	14	10	0	1	0				0	2
Snapper (squire)			0				0					0	0										
Spinefoot - black									0														
Squid – unspecified*					0																		
Steelback															0								
striped seapike						0											2	1					
Swordfish											0												
Tailor				0						0		0											
Threadfin - blue	77	92	54	71	123	40	67	83	106	126	81	66	59	76	71	63	49	39	40	49	41	54	74
Threadfin - flat																			2				
Threadfin - king	252	295	245	336	428	318	473	445	296	310	283	305	248	295	309	378	325	313	176	142	138	169	236
Threadfin - striped									0														
Threadfin - unspecified			0	0								0			0	0				0	27		

											С	atch (	(t)										
Species	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Trevally - giant															0								
Trevally - gold spot												1											
Trevally - golden	5		0					0															
Trevally - unspecified	2	0	0	0		0	6	1	0	0	0	0			1	3	1	0	4	0		0	
Tuna - mackerel												0	0										
Tuna - unspecified															2	2	0		7	11			
Whitespotted Guitarfish	0																						
Whiting - northern	0																						
Whiting - unspecified												0											
Winghead shark													0	1	3	8	1	0	7	16	0	0	0

\* Crab and squid was legally retained with net apparatus in the GOCIFFF until 2016.

		2003				20	04			20	05			20	06			20	07	
Species	Total	Disc. Alive	Disc. Dead	Other	Total	Disc. Alive	Disc. Dead	Other	Total	Disc. Alive	Disc. Dead	Other	Total	Disc. Alive	Disc. Dead	Other	Total	Disc. Alive	Disc. Dead	Other
Dolphin																				
Off-shore bottlenose																	1	1	0	0
Australian Snubfin																				
Unspecified																				
Marine turtle																				
Green	1	1	0	0	1	1	0	0	2	2	0	0					6	6	0	0
Flatback	1	1	0	0																
Hawksbill									1	1	0	0	2	2	0	0	2	2	0	0
Leatherback									2	2	0	0					2	2	0	0
Olive Ridley																				
Unspecified																				
Sharks and Rays																				
Bentfin Devilray																				
Sawfish																				
Green	4	3	1	0	2	2	0	0												
Narrow					35	31	3	1	23	18	4	1								
Freshwater					3	3	0	0									21	19	2	0
Wide									1	0	1	0								
Dwarf																				
Unspecified																				
Crocodile																				
Saltwater					1	1	0	0									1	0	1	0
Unspecified	7	7	0	0																
Sea snake																				
Dugong																				

**APPENDIX F**—Interactions reported in the Species of Conservation Interest (SOCI) logbook by fishers operating in the Gulf of Carpentaria Inshore Fin Fish Fishery. Data includes all reports and encompasses Gillnetting and Anchored Gillnetting fishing operations.

#### APPENDIX F cont.

	2008 ළ පු					20	09			20	10			20	11			20	12	
Species	Total	Disc. Alive	Disc. Dead	Other	Total	Disc. Alive	Disc. Dead	Other	Total	Disc. Alive	Disc. Dead	Other	Total	Disc. Alive	Disc. Dead	Other	Total	Disc. Alive	Disc. Dead	Other
Dolphin																				
Off-shore bottlenose	1	0	1	0																
Australian Snubfin																				
Unspecified																				
Marine turtle																				
Green																				
Flatback									1	1	0	0								
Hawksbill									5	5	0	0	1	1	0	0				
Leatherback									3	3	0	0								
Olive Ridley																				
Unspecified													1	1	0	0	1	1	0	0
Sharks and Rays																				
Bentfin Devilray																				
Sawfish																				
Green									2	2	0	0								
Narrow	1	1	0	0					2	2	0	0	5	5	0	0				
Freshwater	1	1	0	0	12	11	1	0	11	11	0	0	12	11	1	0	2	2	0	0
Wide	10	9	1	0					3	3	0	0								
Dwarf					3	3	0	0	5	5	0	0	3	3	0	0				
Unspecified									106	106	0	0								
Crocodile																				
Saltwater	9	3	6	0	7	2	5	0					3	1	2	0	5	1	4	0
Unspecified	1	0	1	0	1	0	1	0												
Sea snake																				
Dugong																				

#### APPENDIX F cont.

		20	13			20	14			20	15			20	16			20	17	
Species	Total	Disc. Alive	Disc. Dead	Other	Total	Disc. Alive	Disc. Dead	Other	Total	Disc. Alive	Disc. Dead	Other	Total	Disc. Alive	Disc. Dead	Other	Total	Disc. Alive	Disc. Dead	Other
Dolphin																				
Off-shore bottlenose																				
Australian Snubfin													2	1	0	1				
Unspecified													1	1	0	0				
Marine turtle																				
Green													3	3	0	0				
Flatback																				
Hawksbill													2	2	0	0				
Leatherback																				
Olive Ridley																	1	1	0	0
Unspecified													2	2	0	0				
Sharks and Rays																				
Bentfin Devilray																	1	0	1	0
Sawfish																				
Green	19	19	0	0									15	15	0	0	2	1	1	0
Narrow													53	18	15	20	4	3	1	0
Freshwater					4	4	0	0									2	1	1	0
Wide													1	1	0	0				
Dwarf	19	19	0	0					1	1	0	0	1	1	0	0				
Unspecified									6	6	0	0								
Crocodile																				
Saltwater	1	0	1	0									15	2	13	0	27	9	18	0
Unspecified																				
Sea snake					2	2	0	0	2	2	0	0								
Dugong													2	1	1	0				