

Sustainable Fisheries Strategy

2017–2027

Spanner Crab Fishery Scoping Study

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Summary (Table)

Feature	Details
Species targeted	Spanner crab (<i>Ranina ranina</i>)
Fisheries symbols	C2 & C3, spanner crabs only
Legislation	<i>Fisheries Act 1994</i> and subordinate legislation
Working group	Yes
Harvest strategy	Spanner Crab Fishery Harvest Strategy 2020–2025
Fishing area	Tidal waters south of latitude 23° south and east of longitude 151°45' east
Gear	<p>The following apparatus are currently used within the Spanner Crab Fishery:</p> <ul style="list-style-type: none"> • Dillies with an area less than 1m², drop mesh less than 10cm, and a square or rectangle mesh size of at least 25mm (inverted dillies prohibited). • Dillies can be arranged along a trotline <p>A full description of the types of apparatus permitted are outlined in Appendix 1.</p>
Main management methods	<p><i>All fishers</i></p> <ul style="list-style-type: none"> • Spawning closure from 1 November to 15 December • Minimum size limit: 10cm carapace length • No-take on egg-bearing females • Gear restrictions: inverted or 'witches hat' dillies prohibited, compliant float and labels must be affixed <i>etc.</i> (see Appendix 1) <p><i>Commercial only</i></p> <ul style="list-style-type: none"> • Licence restrictions: take limited to spanner crab only • Dilly possession limits (C2 & C3) & dilly usage limits (C2) • Catch restrictions <ul style="list-style-type: none"> - Managed Area A—ITQ quota system and 45 dillies at a time if one person on board the vessel and 75 dillies if two people are on board the vessel - Managed Area B—Daily in-possession limit of 30 containers. • Gear restrictions <p><i>Recreational only</i></p> <ul style="list-style-type: none"> • 4 dillies per person • Dillies must have an area less than 1m² with a net drop less than 10cm and mesh size of at least 25mm • In-possession limit of 20 per person
Quota	<p>Managed Area A (C2): TACC and ITQ system (847t for current fishing season).</p> <p>Managed Area B (C3): No quota but daily in-possession limit of 16 baskets.</p>
Fishing season	20 th December to 20 th November (one month spawning closure)
Commercial fishery licences	<p>Number of C2 symbols: 236 (July 2021)</p> <p>Number of C3 symbols: 196 (July 2021)</p> <p>Total number of licences with access to the fishery: 375 (2018)</p> <p>Number of active licences: 61 (2018)</p>

Feature	Details
Total annual harvest by sectors	Commercial: 905t (Department of Agriculture and Fisheries, 2018) Charter: negligible (Department of Agriculture and Fisheries, 2020a) Aboriginal people's and Torres Strait Islander people's harvest: negligible (McGilvray & Johnson, 2016) Recreational: negligible (McGilvray & Johnson, 2016)
GVP	\$8 million in 2018/19 (BDO EconSearch, 2020)
Stock status	SAFS classifies the east coast spanner crab stock as 'sustainable' (Roelofs <i>et al.</i> , 2020).
EPBC Act Accreditation	<i>List of Exempt Native Specimens</i> (LENS) approval (expires 28 August 2025).

1 Overview

1.1 Commercial Fishery

The management framework for the Spanner Crab Fishery is relatively streamlined as operators are only permitted to target and retain spanner crabs (*Ranina ranina*) using dillies. No other commercial fishery in Queensland is permitted to retain or harvest spanner crabs. However, spanner crabs from the same stock are retained for sale in the New South Wales Ocean Trap & Line Fishery (Department of Agriculture and Fisheries (NSW), 2020; Department of Primary Industries, 2017; Roelofs *et al.*, 2020). In Queensland, the Spanner Crab Fishery is divided into two key areas: Managed Area A (C2 fishery symbol) and Managed Area B (C3 fishery symbol) (Fig. 1). The following provides a broad description of the two areas:

- Commercial Spanner Crab Fishery (Managed area A) is tidal waters south of latitude 23° south and east of longitude 151°45' east.
- Commercial Spanner Crab Fishery (Managed Area B) is Queensland waters north of commercial spanner crab managed area A and east of longitude 142°31'49".

The majority of catch and effort (>99%, 2018–20) reported from the Spanner Crab Fishery originates from Managed Area A. Operators in this area must hold a C2 fishery symbol and a catch allocation managed under Individual Transferable Quotas (ITQs). Within Managed Area A there are a number of regions that attract higher levels of effort including Hervey Bay, Fraser Island, Sunshine Coast, Cape Moreton, and Gold Coast offshore.

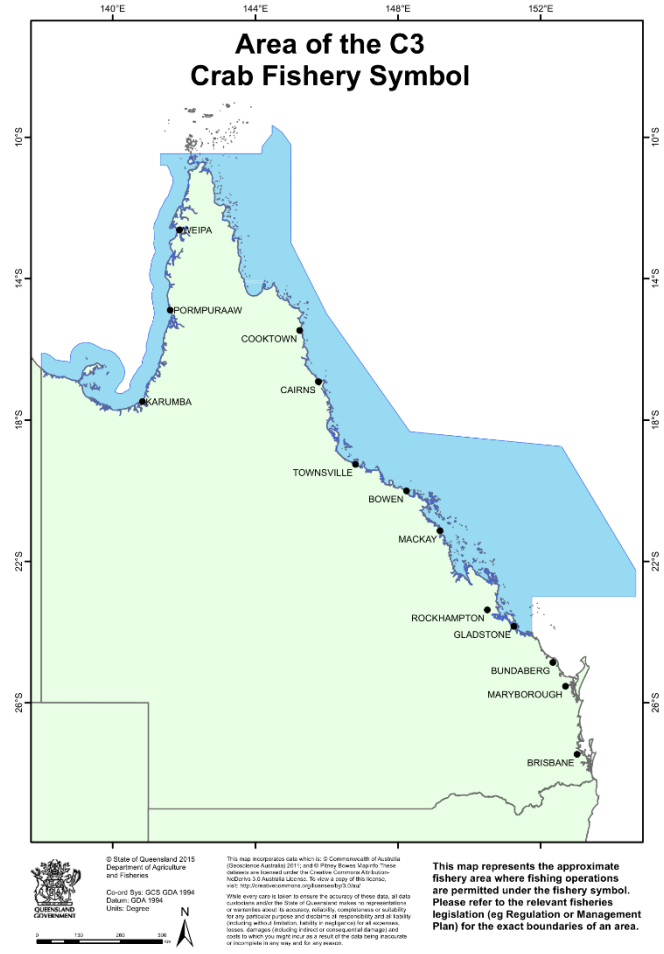
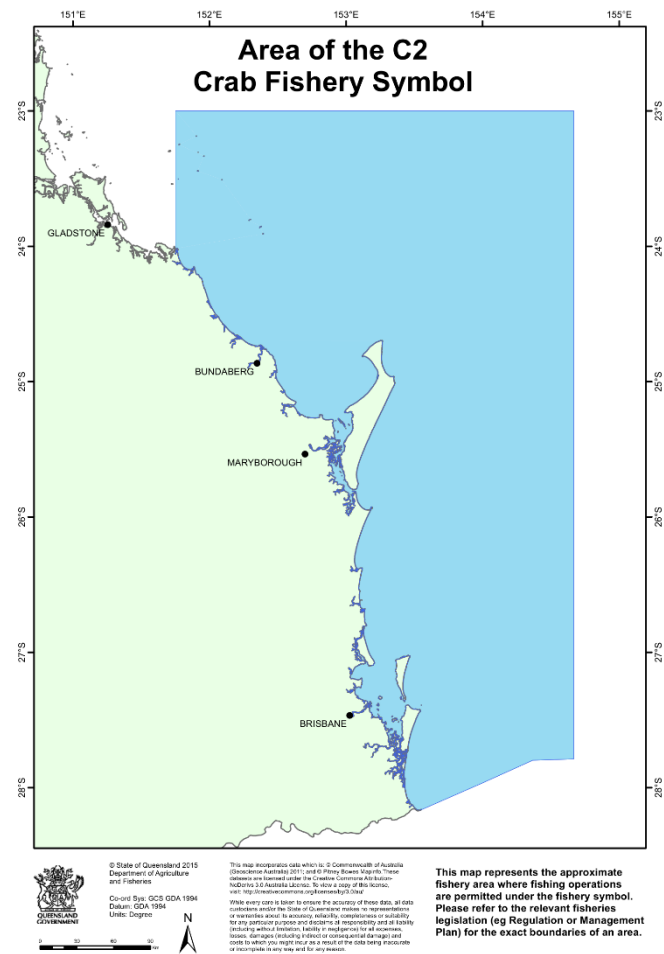
In order to access Managed Area B, spanner crab operators must hold a C3 fishery symbol. Commercial spanner crab catch in Managed Area B is managed through daily container in-possession limits, rather than ITQ. This management difference is because Managed Area B was defined as an exploratory fishing area and the majority of the spanner crab catch and effort occurs in Managed Area A.

1.2 Non-commercial Fishing

The *Statewide Recreational Fishing Survey 2019/20* estimated that Queensland had an annual recreational fishing population of more than 943,000 in 2018/19, with the sector registering a 12-month estimate of 2.8 million fishing days (Teixeira *et al.*, 2021). Spanner crabs are not viewed as a primary species in the recreational and charter fishing sectors with fishers more likely to target mud (*Scylla serrata*) and blue swimmer (*Portunus armatus*) crabs. When compared to these two species, recreational and charter fishing sectors harvest comparatively small amounts of spanner crab (Department of Agriculture and Fisheries, 2020a; Department of Employment Economic Development and Innovation, 2011; Roelofs *et al.*, 2020).

While catch and effort by Aboriginal peoples and Torres Strait Islander peoples is the least understood, DAF assumes that this sector has comparatively low levels of effort with fishing activities aligning more closely with the recreational and charter fishing sectors.

Figure 1. Prescribed fishing areas for the Managed Area A (C2) and Managed Area B (C3). Divide between the two management areas is situated at (approximately) latitude 23 degrees south (near Yeppoon). Refer to the Fisheries (Commercial Fisheries) Regulations 2019 and the Spanner Crab Harvest Strategy 2020–2025 for a more comprehensive overview of the prescribed fishing areas.



2 Legislation & Advisory Bodies

The Spanner Crab Fishery is managed in accordance with the *Fisheries Act 1994* and the relevant subordinate legislation. As catch is managed differently in the Managed Area A (C2 fishery symbol) and Managed Area B (C3 fishery symbol), provisions governing the take of resources are included in both the Fisheries Quota Declaration 2019 (Managed Area A & B) and the Fisheries (Commercial Fisheries) Regulation 2019 (Managed Area B).

Detailed decision rules governing the take of spanner crabs are outlined in the Spanner Crab Fishery Harvest Strategy 2020–2025 (Department of Agriculture and Fisheries, 2020b). Harvest strategy decision rules provide clear guidance for the TACC setting process for Managed Area A and mechanisms to monitor and manage changes in commercial fishing pressures in Managed Area B. These measures are complimented by decision rules targeted specifically at the recreational and charter fishing sectors (Department of Agriculture and Fisheries, 2020b).

A working group has been established for the Spanner Crab Fishery and includes a wide range of stakeholders from the scientific community, management agencies, and conservation groups. It provides advice on the management of the fishery and was central to the development of the Spanner Crab Fishery Harvest Strategy 2020–2025. Information on the Spanner Crab Working Group and meeting communiques are available at: <https://www.daf.qld.gov.au/business-priorities/fisheries/sustainable/fishery-working-groups>.

3 Key Management Controls

The Spanner Crab Fishery operates under a mixture of input and output controls, some of which are only applied to a single management area *i.e.* Managed Area A or Managed Area B. Commercial fishers are subject to a range of general input controls that include spatial and seasonal closures, gear restrictions (*e.g.* number of dillies per symbol) and apparatus limits (*e.g.* dilly mesh size, frame size *etc.*).

Output controls for the entire fishery include a long-standing prohibition on the retention of egg-bearing (berried) female crabs and a minimum legal carapace size limit of 10cm. Managed Area A operates under a Total Allowable Commercial Catch (TACC) limit that is administered through Individual Transferrable Quotas (ITQs). Managed Area B, where total catches are smaller, utilises a more general 16 container daily in-possession limit (Appendix 1).

Management of the recreational fishing sector relies principally on the use of general fishing spatial closures, seasonal closures, gear restrictions, in-possession limits, prohibition on the retention of egg-bearing (berried) females, and minimum legal-size limits. These restrictions, at least for the spatial closures, are more developed on the Queensland east coast where fishers are subject to fisheries-specific regulations as well as those governing the use of marine resources in the *Great Barrier Reef Marine Park* (GBRMP), the *Moreton Bay Marine Park* and the *Great Sandy Marine Park*.

In 2020, the management direction for the Spanner Crab Fishery was formalised as part of a broader harvest strategy. The *Spanner Crab Fishery Harvest Strategy 2020–2025* incorporates the commercial, charter, and recreational fishing sectors and provides the foundation for the long-term management of the stock in Queensland waters. While more complex, the harvest strategy outlines the TACC setting process, decision rules and harvest triggers for all three sectors, monitoring

objectives (sustainability, economic and social), and directions on how ecological risks will be addressed within this fishery.

An abbreviated account of the gear restrictions applied to the Spanner Crab Fishery has been provided in Appendix 1. The Spanner Crab Fishery Harvest Strategy 2020–2025 can also be accessed at: <https://www.daf.qld.gov.au/business-priorities/fisheries/sustainable/harvest-strategy>.

Refer to the relevant Fisheries legislation for a full account of the rules governing the use of the use of the C2 & C3 fishing symbols (available at: <https://www.legislation.qld.gov.au/>).

4 Assessment History

The blue swimmer crab (C1), mud crab (C1) and spanner crab (C2/C3) fisheries have been the subject of a Scale, Intensity, Consequence, Analysis (SICA) (Hill & Garland, 2009). This study focused on the direct impacts of each fishery on vulnerable species and is available for download at: <https://www.daf.qld.gov.au/business-priorities/fisheries/monitoring-research/data/ecological-risk-assessments>

The stock status of spanner crabs has been assessed as part of the Status of Australian Fish Stocks (SAFS) process. SAFS assessments for spanner crabs have been mixed with the 2018 report classifying the east coast stock as ‘depleting’ (Department of Agriculture and Fisheries, 2020b; McGilvray & Johnson, 2018). This assessment reflected research which, at the time, demonstrated a decrease in key biomass indices over the 2015 to 2017 period. Proactive management changes including a reduction in the TACC limit in 2018 redressed the over-exploitation risk and the stock was assessed as ‘sustainable’ in the 2020 SAFS process (Roelofs *et al.*, 2020).

Outside of SAFS, the TACC is set biennially using an empirical model based on fishery catch rates and fishery-independent catch rates (Campbell *et al.*, 2016; Department of Agriculture and Fisheries, 2020c; Roelofs *et al.*, 2020). The TACC setting process is subject to a series of decision rules that consider the outputs of a comprehensive Management Strategy Evaluation (MSE) (*pers. comm.* S. Williams; Filar *et al.*, 2021). These decision rules ensure that the fishery is in a good position to meet one of the core Queensland Sustainable Fisheries Strategy 2017–2027 objectives of rebuilding the stock to 60% of the unfished biomass (Department of Agriculture and Fisheries, 2020b).

More broadly, fishing activities in the Spanner Crab Fishery are considered as part of broad-scale sustainability assessments like 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 caught and retained in Australian waters. The Spanner Crab Fishery is currently covered by a List of Exempt Native Specimens (LENS) approval. The LENS approval is due to expire on 28 August 2025.

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, C = crab pots or dillies) and the area of operation. While operators can have multiple fishery symbols attached to their licence (e.g. N1, N2 and L1 or a L1 and T1), 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 Reef Line 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 one 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 over a 12-month period.

Commercial fishers wanting to access the Spanner Crab Fishery are required to hold either a C2 or C3 fishery symbol (Fig. 1). Fishers accessing Managed Area A under C2 fishery symbol, must also hold ITQ units. For this reason, ITQs and quota availability will be the key determinant in terms of the number of licences that can access Managed Area A. As quotas are not applied to Managed Area B, licence numbers will provide a more appropriate indicator of the operating potential within this area.

Data on the number of licences accessing the Spanner Crab Fishery show that participation rates increased sharply in the early 1990s before undergoing a sustained period of progressive declines. Early datasets for the fishery show that between 80 to 100 operations accessed the fishery each year; increasing to over 200 operations in the 1993–1997 (inclusive) period (Table 1; Fig 2). Participation rates have now declined to below pre-1993 levels with an average of 54 operations reporting catch from the Spanner Crab Fishery each year (Table 1, Fig. 2).

Factors including the introduction of ITQs in the Managed Area A (C2 fishery symbol), strengthening of harvest rules in Managed Area B (C2 fishery symbol), variations in stock abundance and the consolidation of quota holdings would all have contributed to the observed trend of declining participation in this fishery.

The C2 and C3 fishing symbols have significantly different profiles in terms of number of active licences, effort, and catch. In recent years, Managed Area B has made minimal contributions to the total number of active licences (Table 1).

6 Catch & Effort Summary

6.1 Effort

Effort in the Spanner Crab Fishery is monitored through two key parameters, days fished and dilly lifts. Across the fishery, effort trends aligned with those observed for participation rates (Table 1; Fig. 2a). Fisheries data revealed that effort (days fished) peaked in 1994 (17,182 days), declined over a sustained period (1994–2008) before stabilising between 3,000 and 4,000 days. Additional declines in the number of days fished were observed in the 2019 and 2020 seasons (Table 1). Further information is required to determine if this trend represents a short-term anomaly or new normal for annual effort. This decline though aligns with a 2018 decision to recalibrate the TACC limit in response to negative trends observed in the Fishery Independent Survey and standardised Catch Per Unit Effort (CPUE) data.

When compared to days fished, the total number of annual dilly lifts displayed more variability. This was to be expected as this parameter will be influenced more by the structure and configuration of individual fishing operations. At 3,448,156 dilly lifts, the 1994 peak was almost seven times the period preceding the rise in effort (pre-1991, average 498,711 dilly lifts) and approximately three times that observed in recent years (2015–17 average, 1,318,070 dilly lifts) (Fig. 2). After 2006, effort trends become more stable with the fishery generally fluctuating between 880,000 and 1,080,000 dilly lifts (Table 1; Fig. 2b).

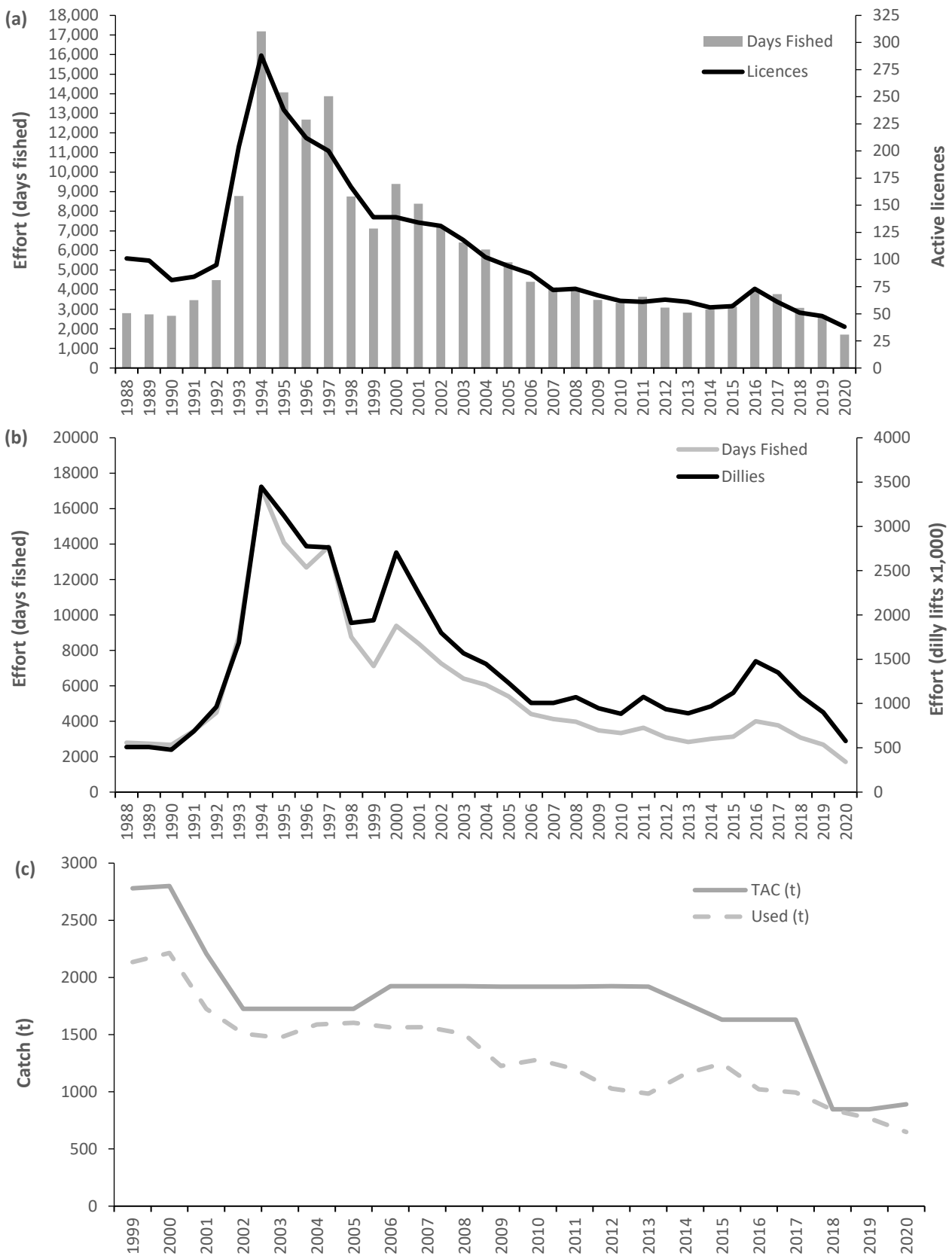


Figure 2. Whole-of-fishery comparisons a) the number of active licences and effort (days fished), b) trend comparisons in effort data: days fished and dilly lifts (x1,000), and c) quota usage comparisons.

Table 1. Overview for the Spanner Crab Fishery including the number of active licences, effort (days and number of dilly lifts), and catch (tonnes).

Year	Managed Area A (C2 fishery symbol)			Managed Area B (C3 fishery symbol)			Whole-of-fishery			
	Active licences	Effort (days)	Catch (t)	Active licences	Effort (days)	Catch (t)	Active licences	Effort (days)	Effort (dilly lifts)	Catch (t)
1988	101	2,794	409	1	1	<1	101	2,795	508,000	409
1989	97	2,713	440	4	24	<1	99	2,737	509,000	441
1990	79	2,655	534	2	11	<1	81	2,666	478,000	534
1991	84	3,467	876	-	-	-	84	3,467	689,000	876
1992	92	4,475	1,325	6	11	2	95	4,486	964,000	1,328
1993	197	8,610	2,364	20	196	56	204	8,785	1,686,000	2,421
1994	272	16,362	3,428	59	916	256	288	17,182	3,448,000	3,684
1995	228	13,734	2,982	32	355	107	238	14,077	3,121,000	3,089
1996	202	11,947	2,775	67	742	140	212	12,682	2,777,000	2,914
1997	197	13,696	3,203	27	181	43	200	13,870	2,761,000	3,245
1998	165	8,711	2,050	22	48	11	167	8,759	1,911,000	2,061
1999	138	7,035	1,782	17	87	40	139	7,122	1,940,000	1,822
2000	135	9,129	2,104	22	262	79	139	9,390	2,705,000	2,183
2001	132	8,238	1,943	23	144	31	134	8,382	2,246,000	1,974
2002	126	7,148	1,558	17	112	32	131	7,259	1,798,000	1,590
2003	114	6,321	1,451	14	82	21	118	6,403	1,568,000	1,472
2004	98	5,963	1,516	10	88	26	102	6,051	1,448,000	1,542
2005	93	5,395	1,548	4	5	1	94	5,400	1,233,000	1,549
2006	87	4,400	1,413	3	4	1	87	4,404	1,007,000	1,415
2007	72	4,116	1,527	-	-	-	72	4,116	1,008,000	1,527
2008	73	3,978	1,584	-	-	-	73	3,978	1,073,000	1,584
2009	66	3,472	1,162	1	9	6	67	3,481	947,000	1,168
2010	62	3,328	1,148	1	1	<1	62	3,329	883,000	1,149
2011	61	3,630	1,297	3	3	<1	61	3,633	1,075,000	1,298
2012	63	3,084	1,039	1	1	<1	63	3,084	936,000	1,039
2013	60	2,829	945	-	-	-	61	2,830	890,000	945
2014	56	3,000	918	1	1	<1	56	3,001	970,000	918
2015	57	3,135	1,177	-	-	-	57	3,135	1,120,000	1,177
2016	73	3,988	1,094	3	5	1	73	3,993	1,478,000	1,095
2017	61	3,768	905	-	-	-	61	3,768	1,351,000	905
2018	51	3,069	846	-	-	-	51	3,069	1,088,000	846
2019	47	2,681	879	1	3	<1	48	2,684	901,000	879
2020	38	1,705	611	1	1	<1	38	1,705	578,000	611

The significant majority of effort in the Spanner Crab Fishery is reported from Managed Area A (99%) (Appendix 2 & 3). Within this area, several high effort hotspots exist including in waters off Hervey Bay, Fraser Island, Sunshine Coast, Cape Moreton, and Gold Coast offshore. In Managed Area B (C3 fishery), most high-effort areas occur on or around the division between the C2 and C3 fishery areas (Appendix 3).

6.2 Catch

Note—Catch levels and quota usage in the Spanner Crab Fishery has historically been monitored and assessed by calendar year. This in part is due to the use of alternate arrangements for Managed Area A and Managed Area B. In 2021, the monitoring program for this fishery was aligned with other quota-managed species i.e. will be reported on by financial year. For historical consistency and comparative purposes, all catch data presented in this scoping study is presented by calendar year.

As most spanner crab effort is reported from Managed Area A (Table 1), annual catch trends are heavily influenced by fishers operating under the C2 fishery symbol. As such changes that impact catch rates in the C2 fishery will be reflected at a whole-of-fishery level. This is perhaps best exemplified by observed changes in the catch data following the introduction of a TACC limit and subsequent amendments to this aspect of the management regime.

Total catch in the Spanner Crab Fishery peaked in 1994 at 3,684 t with a second peak recorded in 1997 (Table 1; Fig. 2). The fishery though has typically reported catch rates below 2,000 t; particularly since the introduction of output controls in 2002 (Campbell *et al.*, 2016). For reference, fishing operations in Managed Area A have yet to fully exhaust their quota within a given year. The closest the fishery came to utilising the full allocation was over the 2002–2005 period (87–93%), in 2018 (99%) and 2019 (91%) (Fig. 2c). Quota usage is influenced by a range of factors including changing fishing behaviours, management changes (e.g. TACC reductions) and variations in stock abundance.

In the Spanner Crab Fishery, two key (standardised) parameters are used to monitor the long-term health of regional stocks and inform management: a Fishery Independent Survey (FIS) and commercial fishery CPUE (Department of Agriculture and Fisheries, 2020c). Historical reviews of the FIS and CPUE showed that both parameters increased from 2000 to 2015; indicating that the spanner crab stocks were in good health. By 2017 the survey index had fallen by 30 per cent with the standardised catch rate value registering at around half the target reference point. These measures combined with concerns over localised depletions, the prevalence of small crabs, and the performance of the fishery resulted in a ‘depleting’ SAFS classification (Campbell *et al.*, 2016; McGilvray & Johnson, 2018; Roelofs *et al.*, 2020).

In response to the negative trends observed in the FIS and CPUE, further management reforms were introduced for the fishery including a TACC limit reduction in 2018 (Fig. 2c). These reforms helped redress the previous overfishing event and the stock was assigned a ‘sustainable’ stock classification in the most recent SAFS assessment (Department of Agriculture and Fisheries, 2020c; Roelofs *et al.*, 2020).

Further information on the performance of the fishery against the standardised FIS and CPUE including the latest management advice can be accessed through the harvest strategy portal (<https://www.daf.qld.gov.au/business-priorities/fisheries/sustainable/harvest-strategy>) and the Spanner Crab Working Group (<https://www.daf.qld.gov.au/business-priorities/fisheries/sustainable/fishery-working-groups/spanner-crab-working-group>).

6.3 Byproduct & Bycatch

Operators with a C2 and C3 fishery symbol are only permitted to retain spanner crabs (*R. ranina*); therefore the fishery does not have a byproduct component.

Bycatch in this fishery will be largely confined to regulated sizes of spanner crab. For these animals, research indicates that post-release mortalities are comparatively high; particularly if they sustain injuries during the fishing event (Brown *et al.*, 1999; Department of Agriculture and Fisheries (NSW), 2020; Johnson, 2021; Kennelly *et al.*, 1990).

Spanner crabs prefers sandy bottom habitats void of structure, and typically live on coastal shelves in waters deeper than 22 m (Brown, 2008). These areas support a diverse array of species and it is likely that some non-target species will interact with the apparatus. However, the landing of non-target species will be minimised by the passive and highly specific trapping nature of the fishing gear (dillies) (Fletcher *et al.*, 2002; Hill & Garland, 2009). Bycatch species recorded from the fishery long term monitoring program included fin fish, molluscs, echinoderms, and other crustaceans. For these species, post-interaction survival rates are expected to be comparatively high (McGilvray *et al.*, 2006).

6.4 Threatened, Endangered and Protected (TEP) Animals

Given the nature of the fishery and the area of operation, the Spanner Crab Fishery will have limited interactions with species classified as Threatened, Endangered or Protected. Only six interactions with TEP species have been reported from the fishery: one in 2014, one in 2016, and four in 2019.¹ All six interactions were with whales with all animals released in a live state.

Across the fishery, there is some potential for contact without capture events to occur. These interactions will include an animal interacting with the boat (*i.e.* boat strike), animals that interacted with the gear and were able to free themselves without further assistance, and animals that were attracted to the bait bag or preying on enmeshed crabs.

7 References

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¹ Interactions with TEP species have historically been reported through the Species of Conservation Interest (SOCI) logbook. Fisheries Queensland have since conducted a review of the SOCI program and its ability to meet the core objective of reporting interactions with species listed under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). In response to this review, reporting requirements were refined and the SOCI logbook replaced with the Threatened, Endangered and Protected (TEP) Animals Logbook.

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8 Appendices

- Appendix 1 – Summary of restrictions/provisions applied to the C2 and C3 fishery symbols.
- Appendix 2 – Whole-of-fishery active licences, effort, and catch by fishing symbol and subregion.
- Appendix 3 – Effort distribution maps for the Spanner Crab Fishery (2018–2020).

Appendix 1—Summary of restrictions/provisions applied to the C2 and C3 fishery symbols.

The following provides a summary of the restrictions applied to the Spanner Crab Fishery. A full account of the restrictions applied to this fishery are provided in the *Fisheries Act 1994*, subordinate legislation (i.e. Fisheries (General) Regulation 2019, Fisheries (Commercial Fisheries) Regulation 2019, Fisheries Declaration 2019, and Fisheries Quota Declaration 2019) and the Spanner Crab Fishery Harvest Strategy: 2020–2025. Copies of the relevant legislation can be accessed at: <https://www.legislation.qld.gov.au/>. The harvest strategy for this fishery can be accessed at: <https://www.daf.qld.gov.au/business-priorities/fisheries/sustainable/harvest-strategy>

Commercial

C2 fishery symbol

Fishing area

- Defined as *Commercial spanner crab fishery (managed area A)*.
- Fishing area consists of the area of tidal waters south of latitude 23° south and east of longitude 151°45' east.
- If the person has taken a spanner crab (the first crab) under the fishery symbol 'C3', the person must not take a crab under the fishery symbol 'C2' until the first crab has been brought ashore on the mainland.

Harvesting

- Spanner crabs may only be taken using a dilly.
- Use of an inverted dilly not permitted.
- Spanner crabs may be taken in a C2-ITQ year only if the crabs are taken under C2-ITQ units with unused entitlements for the C2-ITQ year i.e. a licence holder must a) hold quota and b) have quota available to fish.
- 12-month quota period commencing on 1 July and ending on 30 June the following year.

General gear restrictions

- Dilly frame & net must:
 - an area within its frame of no more than 1m²; and
 - a net drop below its frame of no more than 10 cm;
 - only 1 layer of mesh and each mesh in the layer must be square or rectangular;
 - net mesh size must be at least 25 mm.
- Dilly must have a compliant float attached and either a) a tag on which is written the name of the owner or b) the boat mark of the primary boat identified on the licence.

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- If 2 or more dillies are fixed to a line (*i.e.* in a sequence or series) than a) one end of the line must be attached to a compliant float and b) the float must be attached to a flag that is at least 2m above water.

Symbol-specific (C2) gear restrictions

- Possession of dillies
 - No more than 55 dillies if only 1 person is acting under the licence;
 - No more than 85 dillies if 2 or more persons are acting under the licence.
- Use of dillies
 - No more than 45 dillies permitted for use if there is only 1 person acting under a licence;
 - No more than 75 dillies permitted for use if there are 2 or more persons acting under the licence;
 - No more than 25 dillies may be set of a single line.

Vessel restrictions

- The primary boat must not exceed 20 m in length.
- Tender boat must not be longer than 7m and must not be used more than 800 m from its primary boat.
- An assistant fisher under direction must not be more than 800 m from the primary vessel.

C3 fishery symbol

Fishing area

- Defined as 'Commercial spanner crab fishery (managed area B)
- Fishing area consists of the following tidal waters—
 - waters north of the commercial spanner crab fishery (managed area A) and east of longitude 142°31'49" east
 - waters north of latitude 10°48' south and between longitude 141°20' east and longitude 142°31'49" east
 - waters in the Gulf of Carpentaria between the 25n mile line and the shore of the mainland, south of latitude 10°48' south.
- If the person has taken a spanner crab (the first crab) under the fishery symbol 'C2' under part 2, the person must not take a crab under the fishery symbol 'C3' under this part until the first crab has been brought ashore on the mainland.

Harvesting

- Spanner crabs may only be taken using a dilly.
- Use of an inverted dilly not permitted.
- A daily possession limit (or quota) of 16 containers of spanner crabs applies.

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- A container must be counted as 2 if:
 - it has a whole spanner crab protruding above its top
 - it cannot have another container stacked on top of it so that the other container's bottom touches the top of the container on all sides.
 - If the spanner crabs are not held in a container, then the number of containers is worked out by dividing the number of crabs taken or possessed by 30.
 - A spanner crab taken under the licence may be brought ashore only on the mainland west of longitude 151°45' east (does not apply to the C2 fishery symbol).

General gear restrictions

- As per the C2 fishery symbol.

Symbol-specific (C3) gear restrictions

- Possession of dillies (no restrictions)
 - No more than 35 dillies must be possessed by a fisher on a boat within the fishing area.
- Use of dillies
 - N/A

Vessel restrictions

- As per the C2 fishery symbol.

Recreational

Gear regulation

- Harvesting only by dilly (inverted dillies / witches hats are prohibited).
 - Dilly must be attached to a rope, which must be attached to a compliant float. Dilly and float must be clearly marked with fishers' details.
 - Dilly must have an area within its frame less than 1 m². Net drop below the frame must not exceed 10 cm. Mesh size must not exceed 25 mm
 - No more than four items of crab apparatus may be used at a time, in possession of a recreational fisher.
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Appendix 2—Whole-of-fishery active licences, effort, and catch² by fishing symbol (C2 & C3) and subregion.

This data provides a breakdown of catch, effort, and participation in rates across Managed Area A and Managed Area B. Subdivisions are arbitrary and do not represent regional management or TACC subdivisions. Operators may fish within multiple regions within a given year, and as a consequence, the number of active licences and days fished **cannot be summed across regions**. To do so would result in an overestimate of the total number of active licences and the total number of days fished. Cells with 'n/a' represent years / parameters that the data did not meet the thresholds for the release of data considered commercial in confidence.

Year	Managed Area A (C2 fishery symbol)															Managed Area B (C3 fishery symbol)		
	Gold Coast			Stradbroke Island			Tin Can Bay			Bundaberg			1717			Active licences	Effort (days)	Catch (t)
	Active licences	Effort (days)	Catch (t)	Active licences	Effort (days)	Catch (t)	Active licences	Effort (days)	Catch (t)	Active licences	Effort (days)	Catch (t)	Active licences	Effort (days)	Catch (t)			
1988	22	688	108	81	1,742	257	30	253	33	18	108	11	n/a	n/a	n/a	n/a	n/a	n/a
1989	35	1,069	127	57	872	121	23	363	36	26	417	156	n/a	n/a	n/a	n/a	n/a	n/a
1990	29	1,153	123	36	789	131	14	248	32	25	495	247	n/a	n/a	n/a	n/a	n/a	n/a
1991	34	1,064	143	45	1,414	267	19	301	51	19	672	375	6	44	39	-	-	-
1992	32	1,353	222	56	1,900	409	21	438	71	15	868	601	7	36	22	6	11	2
1993	41	1,679	240	104	3,322	554	59	1,118	318	69	2,416	1,106	31	297	147	20	196	56
1994	51	1,841	235	126	5,204	684	86	2,000	458	120	5,646	1,489	69	2,018	562	59	916	256
1995	45	1,976	290	117	4,711	704	92	2,635	613	88	3,254	978	58	1,349	397	32	355	107
1996	39	1,338	183	90	2,520	383	89	2,716	617	87	3,930	1,130	72	1,839	462	67	742	140
1997	42	1,125	171	87	3,245	566	87	3,057	663	104	4,648	1,296	67	2,088	507	27	181	43
1998	29	920	139	66	1,803	284	65	2,290	562	72	2,297	663	54	1,409	403	22	48	11
1999	20	639	105	54	1,730	295	64	1,563	420	60	2,205	673	45	902	288	17	87	40
2000	20	842	140	64	2,117	309	60	1,682	407	71	3,413	924	50	1,075	324	22	262	79
2001	20	758	138	58	1,734	265	70	2,410	704	61	2,294	560	43	1,042	277	23	144	31
2002	21	1,069	161	59	1,449	203	82	2,623	677	50	1,108	294	33	899	223	17	112	32
2003	20	828	125	53	1,451	201	63	2,187	565	41	1,153	337	34	703	223	14	82	21
2004	19	777	130	44	1,425	216	56	2,262	661	26	887	283	25	613	227	10	88	26

² Catch reported here is based on logbook data, as quota reported catch does not pertain to Managed Area B.

Year	Managed Area A (C2 fishery symbol)															Managed Area B (C3 fishery symbol)		
	Gold Coast			Stradbroke Island			Tin Can Bay			Bundaberg			1717			Active licences	Effort (days)	Catch (t)
	Active licences	Effort (days)	Catch (t)	Active licences	Effort (days)	Catch (t)	Active licences	Effort (days)	Catch (t)	Active licences	Effort (days)	Catch (t)	Active licences	Effort (days)	Catch (t)			
2005	22	664	122	45	1,540	277	49	1,910	629	23	899	355	18	382	164	n/a	n/a	n/a
2006	15	580	108	42	1,044	174	48	1,664	617	24	752	352	19	360	161	n/a	n/a	n/a
2007	13	418	64	34	866	176	36	1,517	697	23	1,062	465	19	253	125	-	-	-
2008	10	364	60	29	954	191	34	1,422	771	28	861	365	16	377	198	-	-	-
2009	12	392	79	25	693	123	37	1,332	505	21	624	264	19	431	192	n/a	n/a	n/a
2010	16	598	115	27	704	147	30	1,211	556	17	463	185	12	353	146	n/a	n/a	n/a
2011	12	429	84	33	752	140	36	1,649	810	14	460	145	13	342	119	n/a	n/a	n/a
2012	13	386	77	27	579	94	37	1,453	628	18	401	140	12	265	100	-	-	-
2013	11	379	71	31	424	71	34	1,312	470	19	356	153	9	359	179	n/a	n/a	n/a
2014	12	444	76	27	342	59	34	1,428	524	20	280	78	16	507	180	n/a	n/a	n/a
2015	11	492	121	30	353	75	38	2,011	900	13	74	21	12	205	60	-	-	-
2016	21	846	194	39	469	89	50	2,260	681	19	122	41	15	292	88	n/a	n/a	n/a
2017	25	945	171	34	421	91	40	1,813	494	15	88	24	8	504	125	-	-	-
2018	19	679	114	32	390	84	32	1,750	596	16	65	14	10	188	39	-	-	-
2019	9	459	85	29	445	97	34	1,528	638	11	36	7	10	215	51	-	-	-
2020	10	265	46	23	264	66	28	1,114	478	7	14	4	5	53	17	n/a	n/a	n/a

Appendix 3—Effort distribution maps for Managed Area A & B for the Spanner Crab Fishery (2018–2020).

Note—Grey shaded boxes represent grids where less than 5 boats reported catch and effort. Catch records for these areas cannot be provided due to restrictions applied to the provision of data considered commercial-in-confidence.

