Annual status report 2011
Queensland Spanner Crab Fishery

Queensland Government

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Fishery profile 2010	
Key species Spanner crab *(Ranina ranina)*	**Fishery season** 20 December–20 November
Total harvest from all sectors 1130 t + unquantified recreational & Indigenous catch	**Total number of commercial licences in 2010** 232 licences holding a C2 symbol and 346 licences holding a C3 symbol as of December 2010
Commercial harvest 1125 t (Total Allowable Catch of 1923 t)	**Commercial licences accessing the fishery in 2010** 62 licences (C2 and C3 symbols combined)
Recreational harvest (2005) 2.5 t	**Fishery symbol** C2 and/or C3
Indigenous harvest Negligible	**Monitoring undertaken** Commercial logbooks (CFISH) and fishery independent monitoring
Charter harvest 5 t	**Accreditation under the EPBC Act** Expires 5 February 2012
Commercial Gross Value of Production (GVP) Approximately $4.6 million	**Logbook validation** No
Sector contribution to total harvest Predominately commercial	**Quota managed** Yes

Key fish resources	Stock status
Spanner crab (*Ranina ranina*) East Coast stock	Sustainably Fished

Comments: Current commercial catch levels are significantly less than historically sustained levels—fishers are catching spanner crabs to meet the current market demand which is lower than in previous years. Current commercial catch rates indicate a slight increase in the population abundance of spanner crabs following the significant decrease recorded between 2008 and 2009. Size frequency graphs show a healthy distribution of individuals across size classes, with a higher representation of females during the 2010 survey than in previous years. Total allowable catch is currently underutilised—in 2010 the annual commercial catch equated to less than 59% of the available quota, the lowest proportion of the TAC caught since the TAC Review introduced the 1 923 t quota in 2006. There are currently no sustainably concerns for this species.

Introduction

The Queensland Spanner Crab Fishery is a predominantly commercial fishery that targets *Ranina ranina*. The majority of the catch is exported live to Asia, with a small quantity of crab sold as chilled cooked product to local markets. The fishery was the first in Queensland to be managed under a quota system and is one of the benchmarks against which other quota fisheries are compared. The fishery operates along the Queensland coast, with most fishing occurring south of the latitude of Rockhampton.

This report describes the fishery for the period January to December 2010.

Fishery Description

Fishing Methods

Commercial and recreational fishers are permitted to take spanner crabs using dillies.

Legislation states that a dilly must have an area within its frame of no more than 1 m^2 and a net drop below its frame of no more than 10 cm. A dilly's net must have only one layer of mesh and each mesh in the layer must be square or rectangular. The mesh size of the net must be at least 25 mm.

Recreational fishers are permitted to use a maximum of four dillies, collapsible traps or crab pots at any time. Inverted dillies or 'witches' hats' have been phased out and have been prohibited for use since April 2010.

Fishing Area

Spanner crab fishing is permitted in all Queensland coastal waters, from the New South Wales (NSW) border to the Northern Territory border (Figure 1). The fishery is concentrated in the area between Yeppoon in central Queensland and the Queensland–NSW border.

The commercial fishery is divided spatially into two Managed Areas (A and B; Figure 1). Operators must hold a C2 licence to harvest spanner crabs in Managed Area A and a C3 licence to harvest spanner crabs in Managed Area B. The managed areas are subject to different management arrangements (see 'Main management methods used').

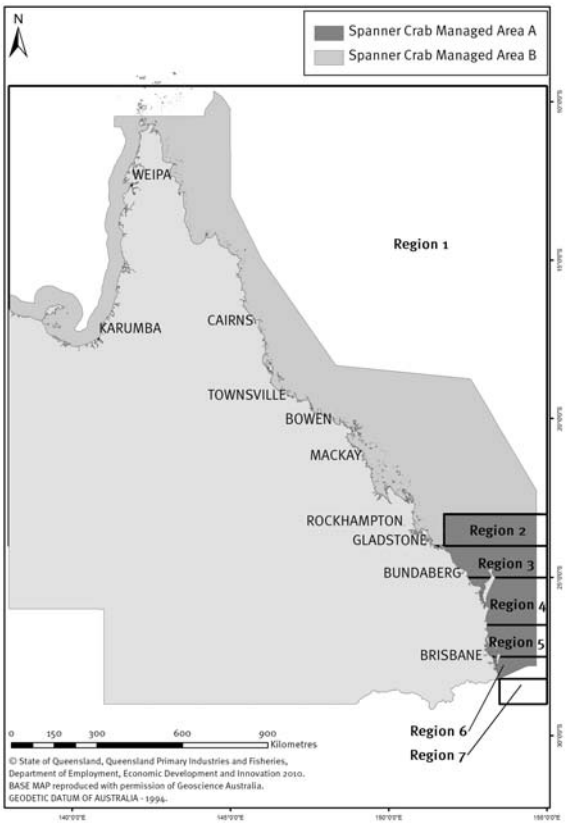

Figure 1: Queensland Spanner Crab Fishery managed areas and regional delineations.

Key Species

The target species of the Queensland Spanner Crab Fishery is *Ranina ranina,* a true brachyuran crab representing the only species of its genus in the Family Raninidae. It is commonly known in Australia as the spanner crab, and elsewhere as the red frog crab (South-east Asia), kona crab (Hawaii) and krab giraf (Seychelles).

Information contained in this section of the report was sourced from Kailola et al. 1993.

Spanner crabs are abundant in southern Queensland and northern New South Wales waters. In Australia, distribution is patchy and there is no evidence of the existence of significant populations of the species in any Australian state other than Queensland and New South Wales. Spanner crabs prefer bare sandy areas (Skinner and Hill 1986) and typically inhabit intertidal coastal waters to depths of more than 100 m.

Spanner crabs remain completely buried in the sand for most of the day, emerging rapidly when food appears (Skinner and Hill 1986). Like most crabs, they are opportunistic feeders, adults consuming heart urchins, crustaceans, polychaete worms, dead fish and a variety of small bivalve molluscs (Brown 1986).

Spawning occurs during the warmer months of the year (October to February). Mature crabs can mate at any stage within their moult cycle (Brown 1986) and females store their partners' sperm until the eggs are extruded. The female often buries herself to incubate and protect the egg sponges. During one season a large female spanner crab will produce at least two batches of eggs, with each egg mass containing an average of 120 000 eggs per batch. Fertilised eggs remain attached to the female for approximately four to five weeks before hatching (Brown 1986).

Spanner crabs metamorphose through eight larval stages during the following two months of their life. Larvae eventually settle and enter the final transformation into the recognisable spanner crab form (Brown 1986). As with other crustaceans, growth occurs through moulting. This involves the shedding of the hard shell, and then swelling of soft body tissues to expand the new soft shell before it hardens. Attempts to estimate the growth rate and longevity of this species have yielded inconsistent results, and at this stage these population parameters remain uncertain.

Main management methods used

Fisheries Queensland manages the Spanner Crab Fishery in accordance with the objectives of Queensland's *Fisheries Act 1994* and the Queensland Fisheries Regulation 2008. The fishery is also subject to marine park zoning under the Commonwealth *Great Barrier Reef Marine Park Act 1975* and the Queensland *Marine Parks Act 1982*.

The commercial fishery is managed by output controls and some apparatus (gear) limits, while the recreational fishery is managed by effort limitation mechanisms:

Output controls

- Managed Area A has a commercial total allowable catch (TAC), divided among licence holders using an individual transferable quota (ITQ) system. The annual TAC for 2010–11 was 1923 t.
- Managed Area B has a boat trip limit of 16 baskets.
- Recreational fishers are subject to a possession limit of 20 spanner crabs.

Additional controls

- Minimum size limits of 10 cm carapace length apply to all fishers; if the carapace is damaged or missing, a minimum size limit of 3.7 cm sternite (under body) length applies.
- Egg-bearing (berried) females are protected and are not allowed to be taken.
- Spawning season closures apply to all fishers from midnight on 20 November to midnight on 20 December every year.
- Catch must be unloaded ashore before fishing operations move from one managed area to the other.
- Managed Area A has a maximum possession limit of 45 dillies, with a maximum of 15 dillies per trot line.
- Managed Area B has a maximum possession limit of 30 dillies, with a maximum of 10 dillies per trot line.
- Commercial fishers operating in Managed Area A have the opportunity to apply for a General Fisheries Permit (GFP) entitling the holder to use more than 45 dillies. As of 2010 there were 22 GFPs issued with this entitlement.
- Recreational fishers are subject to a maximum possession limit of four pieces of apparatus per fisher.

Total Allowable Catch

Managed Area A has a TAC which is set every two years in accordance with approved rules and scientific method. The TAC review[1] is conducted by the Crab Scientific Advisory Group (SAG) and involves the standardisation and calculation of indexes using commercial logbook data and fishery independent data. Although the TAC review recommended that the annual TAC for the period June 2010–May 2012 be set at 1 821 t (which lay just outside the lower range of the +/- 5% buffer range of the current TAC by a margin of 5 t), Fisheries Queensland has approved that the TAC for the next two years will remain unchanged at 1 923 t.

In setting the quota for the next period Fisheries Queensland considered a number of factors, including:

- The very small margin the new quota value lay outside the buffer range
- The TAC has not been reached for several years
- Unusual environmental factors (sea toad plague) persisting during 2009
- The potential adverse affect of a reduction in TAC on smaller operators who catch all of their quota

[1] The Queensland Spanner Crab TAC review report for the TAC period June 2010–May 2012 is available at http://www.dpi.qld.gov.au/28_17389.htm

- The recent low market prices for spanner crab.

Catch statistics

Commercial

Annual reported commercial spanner crab landings in Queensland remained relatively stable between 2009 and 2010; this is reflected in the 4% variation in catch between the two years. In 2010, 1 125 t of spanner crabs were harvested over 3 271 fishing days (Table 1). The annual commercial catch for 2010 equates to less than 59% of the available commercial TAC—the lowest proportion of the TAC caught since the TAC Review introduced the 1 923 t quota in 2006.

In 2010, low market prices and market enforced harvest restrictions continued—illustrated in recent catch and effort figures (Table 1, Figure 2). A lack of overseas marketing opportunities, adverse exchange rates and rising fuel costs are largely responsible for determining the performance of this predominately export fishery.

Logbook data continue to show high catches of spanner crabs in September and October. Catches during these months contributed 31% to the total spanner crab commercial landings in 2010.

Table 1: Catch and effort data for the commercial harvest of spanner crabs, 2000–2010 (Source: Fisheries Queensland CFISH database, 5 May 2011).

Year	Licences	Days	Dilly Lifts	Weight (t)
2000	139	9 388	2 706 703	2 183
2001	134	8 387	2 249 423	1 975
2002	131	7 260	1 800 101	1 590
2003	118	6 409	1 570 356	1 472
2004	102	6 053	1 451 545	1 544
2005	94	5 398	1 235 040	1 549
2006	87	4 399	1 007 564	1 415
2007	72	4 109	1 007 890	1 527
2008	73	3 978	1 074 828	1 584
2009	67	3 479	947 207	1 168
2010	62	3 271	882 711	1 125

Catch per unit effort (CPUE) increased from 1.2 kg/dilly lift in 2009 to 1.3 kg/dilly lift in 2010 (Figure 2). CPUE indicates a slight increase in population abundance of spanner crabs following the significant decrease recorded between 2008 and 2009.

In 2010, Managed Area A (C2 endorsements) was responsible for 99.9% of the harvest taken in the Spanner Crab Fishery. Managed Area A comprises five assessment regions, Region 2: Yeppoon to Bustard Head east of 151°45' E, Region 3: Bustard Head to Waddy Point, Region 4: Waddy Point to Noosa Heads, Region 5: Noosa to Point Lookout and Region 6: Point Lookout to Tweed Heads (Figure 1). In 2010, a mere 300 kg of spanner crabs were harvested in Managed Area B (C3 endorsements).

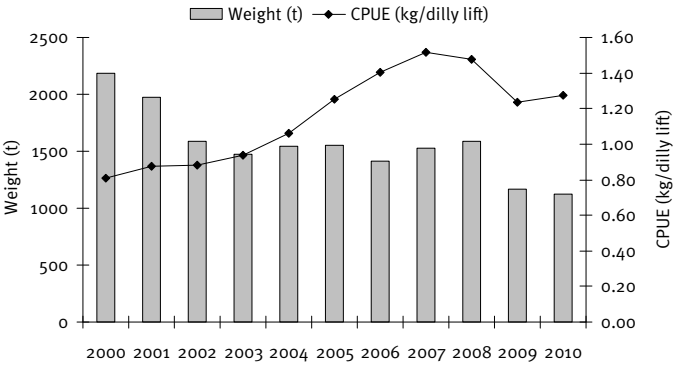

Figure 2: Total commercial catch and CPUE in the Spanner Crab Fishery 2000–2010 (Source: Fisheries Queensland CFISH database, 5 May 2011).

Regions

CPUE in Regions 4 and 5 were higher in 2010 than 2009 by 15% and 17% respectively (Figure 3). The increase in spanner crab yield per dilly for Region 4 is likely attributed to the absence of toadfish in the 2010 fishing year. Whilst an increase was recorded against the previous year of logbook entries, levels of commercial catch and CPUE are likely returning to their pre infestation levels.

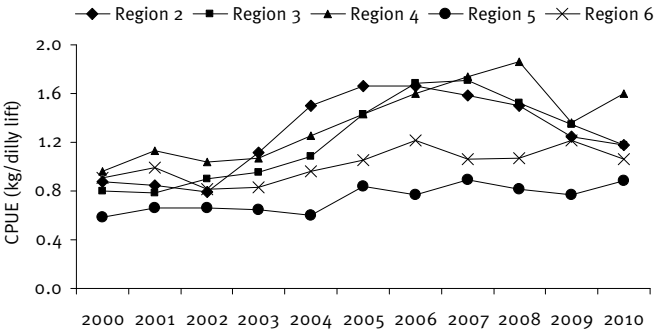

Figure 3: CPUE (kg/dilly lift) of the locations within Managed Area A in the Spanner Crab Fishery 2000–2010. (Source: Fisheries Queensland CFISH database, 5 May 2011).

In 2010, Regions 2, 3 and 6 recorded decreases in CPUE levels of 6%, 12% and 12% respectively (Figure 3). Regions 2 and 3 were frequented by the lowest number of fishers recorded in the past decade resulting in a decrease in fishing days, catch and subsequently CPUE. In contrast more fishers and fishing effort days were attributed to the harvest of spanner crabs in Region 6 in 2010 compared to 2009—the drop in CPUE for Region 6

indicates that there was a possible drop in the yield of harvestable males and females per dilly.

Recreational

The statewide recreational catch of spanner crabs is considered to be significantly less than the commercial catch. Data from the 2005 Recreational Fishing Information System (RFISH) diary survey indicated that recreational sector were responsible for less than 1% of the total spanner crab harvest across the state. Refer to the 'Recreational' section of the 2007 Spanner Crab Fishery Annual Status Report for previous figures statistics.

In 2010 Fisheries Queensland commenced a new statewide recreational fishing survey. This survey will provide current and robust data about the recreational harvest of spanner crabs and other species by Queenslanders. The results of this survey will be available by mid 2012.

Charter

Data from charter logbooks indicated that the charter sector caught a total of 8.2 t of spanner crab (4.6 t were retained and 3.6 t were released) in 2010, which equates to less than 1% of Queensland's estimated total landings of spanner crabs for this year.

Indigenous

No estimates are available, there is no evidence to suggest that spanner crabs are harvested by Indigenous fishers.

Spatial issues/trends

In 2010, the majority of the spanner crab catch (73%) was taken from waters south of Baffle Creek (24.5° S). In 2010, the most productive region was offshore from Double Island Point; followed closely by the offshore area associated with Gladstone, the area north of Hervey Bay and the Sunshine Coast (Figure 4).

The high catch associated with the offshore region by Double Island Point is thought to result from environment productivity and concentration of fishing effort. Double Island Point is favoured by larger boats as it is less intensively fished, being less accessible to smaller boats, particularly in poor weather.

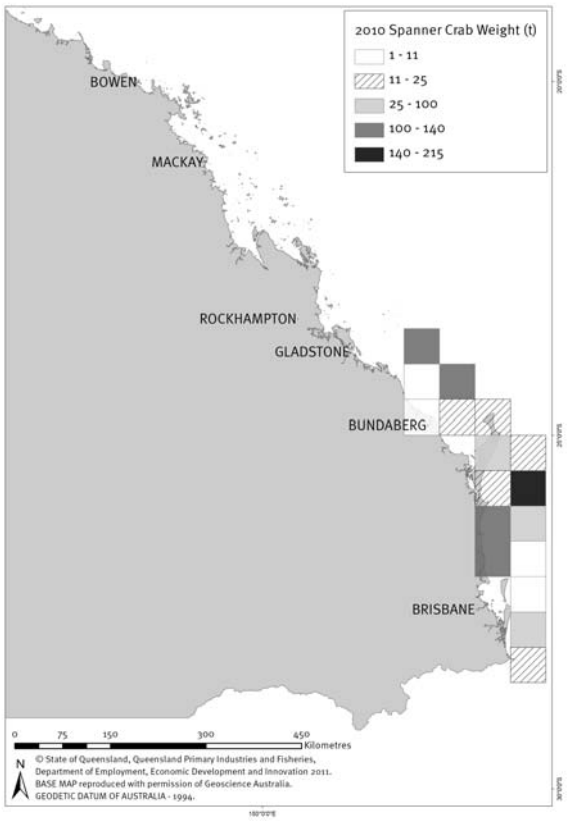

Figure 4: Spatial distribution of commercial catch (tonnes) in the Spanner Crab Fishery in 2010 (Source: Fisheries Queensland CFISH database, 5 May 2011).

Socio-economic characteristics and trends

Prices paid to fishers for spanner crabs fluctuate between $3.50/kg and $5/kg, depending on the market (domestic versus export), the quality of the product and the level of demand from wholesalers to meet market conditions. The typical price obtained for live product in 2010 was $4.10/kg. There have been no significant upward or downward trends in prices over the last decade.

In 2010, 56% of the licences holding a C2 and/or C3 symbol generated their entire annual fishing income from the Spanner Crab Fishery (Figure 5). This equates to a 14% increase between 2009 and 2010 in the number of licences earning their entire income through the harvest of spanner crabs.

In 2010, 34% of fishers who operated in the Queensland Spanner Crab Fishery earnt between $20 000 and $60 000 (Figure 6). An additional 23% fell into the lower income categories grossing under $10 000, suggesting that a number of vessels operate in other commercial fisheries throughout the year or that fishing provides only part of their income. At the top end of the income bracket, 23% of fishermen earnt over $100 000. Income estimates have generally decreased between 2009 and

2010, with more fishers earning in the lower income categories.

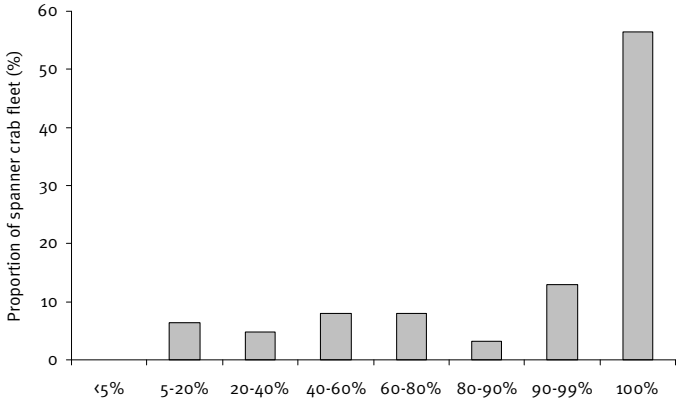

Figure 5: Contribution of spanner crab harvest to fishing vessel's annual fishing income in 2010 (Source: Fisheries Queensland CFISH database, 5 May 2011).

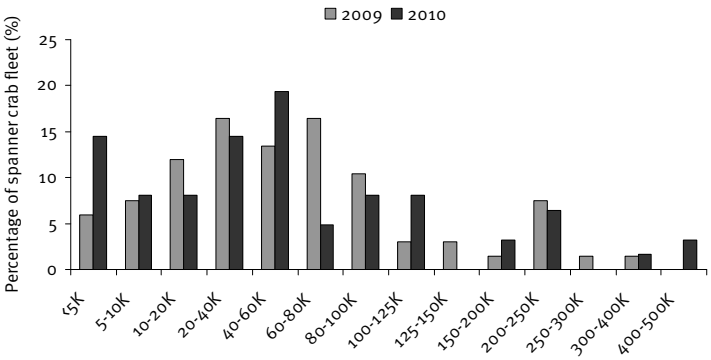

Figure 6: Income distribution of licence holders in the Spanner Crab Fishery in 2008 and 2010 (Source: Fisheries Queensland CFISH database, 5 May 2011).

Biological and ecological information

Monitoring Programs

Fishery independent monitoring

Fishery independent monitoring of spanner crab stocks is conducted in Managed Area A of the Queensland fishery and in New South Wales as part of a collaborative arrangement which monitors the shared spanner crab stock. Regional delineations for fishery independent monitoring are identical to those used in the commercial sector (except for New South Wales) (Figure 1).

Between 2000 and 2010, the fishery independent spanner crab survey has undertaken approximately 37 400 and 3 600 individual dilly lifts, in Queensland and New South Wales respectively. In Queensland, 85% of the overall catch was males, compared with New South Wales where only 42% were males.

The number of crabs caught during the Queensland 2010 survey was very similar to the number caught in the 2007 survey (Table 2). Unlike 2009, no toadfish interactions were recorded in management Region 4 in 2010. Accordingly the numbers of crabs caught from this region has returned to historical survey levels.

In New South Wales the numbers of crabs caught was higher than in 2009, with the number of female crabs counted more than doubling the previous years total (Table 3).

Table 2: The number of crabs caught each year during the Long Term Monitoring Program surveys in Queensland; * MLS (minimum legal size, 100 mm carapace length).

Year	Male crabs (no.)	Female crabs (no.)	Male crabs % above MLS*	Female crabs % above MLS*
2000	4774	855	62	15
2001	4786	526	66	13
2002	3329	440	75	13
2003	4328	695	72	10
2005	6250	1269	67	11
2006	6923	1198	69	13
2007	5870	1059	63	14
2008	7833	1141	67	12
2009	4759	876	59	15
2010	5817	1146	62	13

Table 3: The number of crabs caught each year during the Long Term Monitoring Program surveys in New South Wales; * MLS (minimum legal size, 100 mm carapace length).

Year	Male crabs (no.)	Female crabs (no.)	Male crabs % above MLS*	Female crabs % above MLS*
2005	209	217	90	38
2006	164	135	93	47
2007	305	372	71	6
2008	247	337	68	7
2009	267	344	81	36
2010	468	860	81	32

In Queensland, catch rates during the 2010 survey were higher than those of the previous year in all regions (Figure 7).

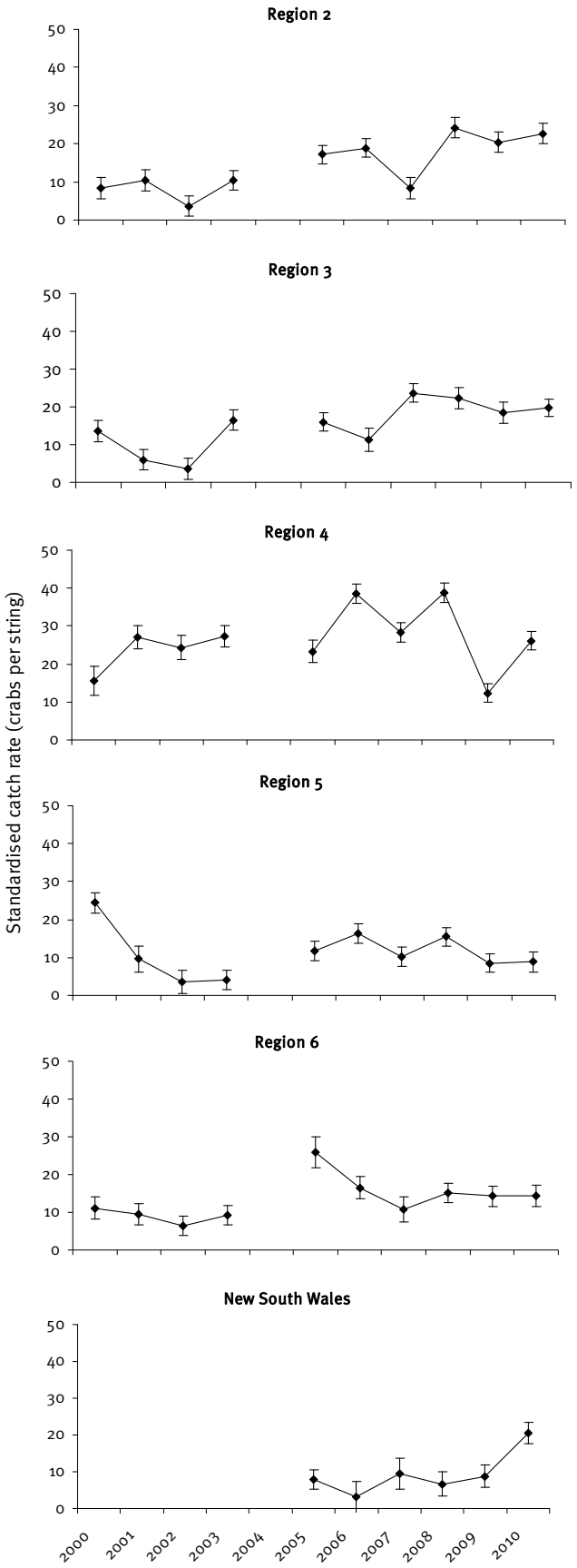

Figure 7: Modelled mean catch rate (crabs per string) of spanner crabs by region and year, from Long Term Monitoring Program fishery independent surveys. Error bars are standard error.

A substantial increase in catch rate is evident between 2009 and 2010 for Region 4 and New South Wales regions. In the case of Region 4, catch rate returned to traditional levels (the 2009 survey was affected by toadfish interactions with the sampling gear), whilst the New South Wales region catch rate more than doubled when compared with previous years.

Interactions with protected species

An interaction is any physical contact with a protected species. In 2010 the Spanner Crab Fishery reported two interactions with species of conservation interest; one with a green turtle and one with a humpback whale, both were released alive.

Ecosystem Impacts

The impact of the fishery on the ecosystem is considered to be low. The fishing apparatus used (dillies) has little impact on the physical environment as they are lightweight and stable and generally deployed on open sandy substrates.

The Spanner Crab Fishery targets crabs in areas further offshore compared with inshore crab fisheries (e.g. the Mud Crab Fishery). This buffers the fishery to some extent against impacts from habitat modification and coastal development. Fishing pressure on stocks from non-spanner crab fisheries is negligible as spanner crabs are not permitted to be retained unless the operator holds a C2 or C3 symbol on their licence.

Sustainability Assessment

Performance against fishery objectives

A number of review events are incorporated into the interim policy for the review of management arrangements for the Spanner Crab Fishery. The review events are a series of measures by which Fisheries Queensland monitor the performance of the Spanner Crab Fishery. The following table outlines the review events and the evaluation of the fishery against these for the 2010 calendar year (Table 4).

Table 4: Review events in the Spanner Crab Fishery.

Review Event	Performance
Target Species	
1(a) The annual quota for managed area A significantly declines; or 1(b) The chief executive accepts a scientific study that shows a significant decline in the abundance of— (i) Spawning spanner crabs; or (ii) Egg-bearing spanner crabs; or (iii) Juvenile spanner crabs.	1(a) *Not triggered* In 2009, the Spanner Crab Fishery underwent an 'in-cycle' assessment as part of the biennial review. The annual quota for June 2010–May 2012 will remain unchanged at 1923 t. 1(b) *Not triggered* A comprehensive search of the scientific literature found no scientific studies that indicated a significant decline in the abundance of spanner crabs.
2(a) The chief executive accepts a survey of recreational, Aboriginal or Torres Strait Islander fishing for spanner crabs that shows a significant decline in spanner crab catches; or 2(b) The chief executive's receipt of commercial fishing catch and effort data for spanner crabs that shows a significant decline in the commercial catch of spanner crabs.	2(a) *Not measured* There are no current recreational or Indigenous survey results which indicate a significant decline in spanner crab catches. 2(b) *Not triggered* The annual reported commercial spanner crab catch in Queensland decreased from 1167.5 t in 2009 to 1124.5 t in 2010; this accounts for 3% drop in total harvest.
3(a) The annual commercial catch of spanner crabs in managed area A significantly declines; or 3(b) The chief executive accepts a survey of recreational, Aboriginal or Torres Strait Islander fishing for spanner crabs that shows a significant change in catches of spanner crabs.	3(a) *Not triggered* The annual reported commercial spanner crab catch in Queensland decreased from 1162.5 t in 2009 to 1124.5 t in 2010; this accounts for 3% drop in total harvest. 3(b) *Not measured* There are no current recreational or Indigenous survey results which indicant a significant decline in spanner crab catches.
There is a significant and progressive decline in— 4(a) The accuracy of information given by commercial fishers in logbooks required by the chief executive; or 4(b) Compliance with logbook returns required by the chief executive.	*4(a) Not triggered* Trends seen in fishery independent monitoring match those found in logbook data, indicating that logbook data are accurate. *4(b) Not triggered* Routine biannual logbook compliance checks show no decrease in compliance.

The Spanner Crab Fishery review events are due to undergo a review in 2011 to align with Fisheries Queensland's Performance Measurement System (PMS) Framework.[2]

Current sustainability status and concerns

The prohibition on taking egg-bearing females and undersized crabs in Queensland was designed to prevent the catch of very small crabs and to protect a large proportion of the exploitable female stock. The Spanner Crab Fishery was the first fishery in Queensland to be managed under a quota-based management system.

In 2006, an Ecological Risk Assessment (ERA) was undertaken to assess the impacts on the target species, bycatch species and benthic community and to ensure that the fishery continues to be managed in an ecologically sustainable manner. The ERA indicated that the consequence to bycatch and to the benthic community were negligible to minor, however fishing was considered to have a moderate consequence on the target species.

[2] The Fisheries Queensland PMS Framework is available at http://www.dpi.qld.gov.au/28_11060.htm

Expert and stakeholder opinion determined that the moderate consequence on the target species did not warrant progression of the assessment through to a higher level risk analysis. Fisheries Queensland remains committed to seeking solutions to reduce the consequences of fishing on target species. The current management arrangements are precautionary in nature, ensuring sustainable use of spanner crab populations. At current fishing levels the resource is considered not to be fully exploited or to adversely affect the long term recruitment dynamics of spanner crabs and so no management response is currently required. The response time to any changes in fishing pressure is rapid due to the biennial review of the commercial TAC. The Spanner Crab Fishery ERA is scheduled for review during 2011.

Fisheries Queensland has developed and implemented a stock status reporting framework[3] which uses defined exploitation criteria to determine the status of a stock. In May 2011, a second stock status workshop was held to re-assess the east coast spanner crab stock.[4] From the information presented, Fisheries Queensland and Agri-Science experts and representatives were able to re-assess the east coast spanner crab stock—which is still considered to be 'Not Fully Utilised' under the current management regime.

There are no resource concerns for the fishery due to current participation levels and the precautionary management arrangements incorporated in the TAC setting process. However, there are significant concerns for the future of the fishery because of rising production costs, restricted access to export markets and stagnating beach prices.

Research

Recent research and implications

Two research papers (Dichmont and Brown 2010; O'Neill et al. 2010) have resulted from the accumulated research and management processes developed by the Spanner Crab Stock Assessment Group over the past decade. O'Neill et al. (2010) details the development of a new management procedure, which readily accounts for varying catch rates and strong trends in fisheries data. This method employs the use of fishery dependent and fishery independent standardised catch rates to identify precautionary levels of TAC.

Dichmont and Brown (2010) describe the three management strategy evaluations (MSEs) that have been undertaken by the SAG to refine the assessment process and decision rules. The success of the TAC setting process is attributed to the use of simple decision rules, developed in accordance with the size of the fishery and knowledge of the resource. The management system has been designed to be adaptive over time as more is learnt about the biology of the spanner crab and how the harvest strategies affect the management of the fishery.

Both papers note that the data-based procedures are simple to follow, flexible for change in fishery conditions and adaptable for use in many fisheries. These procedures rely not only on scientific advances, but on the accumulated knowledge of experts (scientists, industry and management) in a cooperative environment. Application of the harvest strategy for this fishery can be found in the latest SAG report (Brown 2010) which details the procedures used to set the current (2010–12) annual TAC for the fishery.

Collaborative research

As part of the CSIRO-DERM-DEEDI collaborative program to monitor the effects of the recent re-zoning expansion of the Moreton Bay Marine Park, Agri-Science Queensland staff have initiated a study of the zoning effects on benthic macrofauna (particularly spanner crabs and blue swimmer crabs) offshore from Moreton and Stradbroke Islands. The study is using conventional capture methods as well as baited remote underwater video to assess changes in population density of demersal macrofauna on uniform sandy substrates resulting from the exclusion of fishing activity from certain areas east of the islands.

Fisheries Queensland conducts ongoing collaborative monitoring of spanner crab stocks with New South Wales. Cross-jurisdictional monitoring, which was an important outcome of a recent FRDC-funded research project (Brown et al. 2008), provides an enhanced fishery independent reference for both states ensuring that spanner crab stocks continue to be harvested sustainably. For further information please refer to the 'Fishery independent monitoring' section.

[3] A copy of the Stock Status Framework can be found at: http://www.dpi.qld.gov.au/28_16916.htm

[4] The initial stock status workshop was held in May 2010, where it was determined that the Queensland spanner crab stock was deemed as 'Not Fully Utilised'.

Fishery Management

Compliance Report

During 2010, 68 units, including 42 commercial fishing vessels were inspected in the Spanner Crab Fishery. A total of 12 offences were detected during the course of these inspections, corresponding to a compliance rate of 90% on units inspected (commercial compliance = 95% and recreational compliance = 64%[5]) (Table 5). The overall compliance rate for the Spanner Crab Fishery more closely resembles the commercial compliance rate as the majority of inspections are conducted in this sector of the fishery—there is minimal recreational activity associated with spanner crabs.

Offences are reported as either a Fisheries Infringement Notice (FIN); Caution (FIN Caution or official caution issue by Legal) or Prosecution (to proceed by complaint summons).

Table 5: Offences recorded in the commercial and recreational sectors of the Spanner Crab Fishery 2010.

OFFENCE	Caution	Fin
Contravene a regulated fishing apparatus declaration (rec fisher)	1	-
Fail to give required information to the Chief Executive in stated way or by stated time	4	2
Fail to obtain or keep required information in the approved form	-	1
Fail to produce a document required to be available for immediate inspection	-	1
Recreational fisher take or posses regulated fish	-	2
Take more product than an authorities quota allows	-	1
TOTAL	**5**	**7**

Note: Of these offences, nine were by the commercial sector comprising of eight operators. In addition to the above inspections and offences, two incorrectly market spanner crab dillies were seized from tidal waters in Queensland.

Education forms an important component of the compliance strategy for all of Queensland's fisheries. Queensland Boating and Fisheries Patrol (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.

Changes to management arrangements in the reporting year

There were no changes to management arrangements for the Spanner Crab Fishery during 2010.

Communication and education

The Fisheries (Spanner Crab) Management Plan 1999 was repealed in March 2010. All relevant legislation from the plan was moved into the Queensland Fisheries Regulation 2008. It should be noted that no significant changes were made to the legislation. To view the legislative instrument which was used to make these amendments, please visit: www.legislation.qld.gov.au

Complementary management

Queensland fisheries managers and researchers continue to work with their New South Wales counterparts towards complementary monitoring and research. In 2010, New South Wales Department of Primary Industries and Fisheries Queensland continued their annual cross-border fishery-independent survey, covering the entire east coast spanner crab stock.

[5] Due to the minimal activity associated with spanner crab in the recreational sector, only a few offences are required to generate a low level of compliance.

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Front cover image

Spanner crab *(Ranina ranina)*