Annual status report 2010
Queensland Spanner Crab Fishery

Queensland Government

On 26 March 2009, the Department of Primary Industries and Fisheries was amalgamated with other government departments to form the Department of Employment, Economic Development and Innovation.

Fishery profile 2009	
Key species Spanner crab	**Fishery season** 20 December–20 November
Total harvest from all sectors 1003 t + unquantified recreational & Indigenous catch	**Total number of commercial licences in 2009** 224 C2 licences and 349 C3 licences as of December 2009
Commercial harvest 1003 t (Total Allowable Catch of 1923 t)	**Commercial licences accessing the fishery in 2009** 67 (C2 and C3 combined)
Recreational harvest (2005) 2.5 t	**Fishery symbol** C2 or C3
Indigenous harvest Negligible	**Monitoring undertaken** Commercial logbooks (CFISH) and fishery independent monitoring
Charter harvest 7.4 t	**Accreditation under the EPBC Act** Expires 5 February 2012
Commercial Gross Value of Production (GVP) Approximately $4.1million	**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	Not Fully Utilised

Comment: Current catch levels are significantly less than historically sustained levels. Size frequency graphs show healthy distribution of individuals across carapace classes. Total allowable catch (TAC) is underutilised and has not been reached at any time during the past decade.

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 2009.

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.

Commercial fishers can use a maximum of 45 dillies in Managed Area A and a maximum of 30 dillies in Managed Area B (see following sections on 'Fishing area' and 'Main management methods used').

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 in Managed Area B. The managed areas are subject to different management arrangements (see 'Main management methods used').

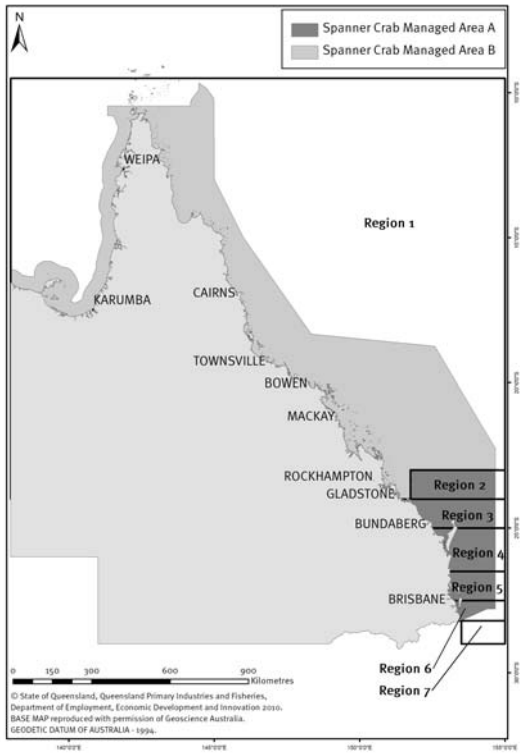

Figure 1: Queensland Spanner Crab Fishery managed areas and regional delineations.

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 probably 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 control (an ITQ-based annual quota or Total Allowable Catch) 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 2009–10 is 1 923 t
- Managed Area B has a catch limit of 16 baskets
- Catch must be unloaded ashore before fishing operations move from one managed area to the other
- Recreational fishers are subject to a possession limit of 20 spanner crabs
- 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.

Input controls

- Boat and apparatus restrictions apply to all fishers
- Spawning season closures apply to all fishers from midnight on 20 November to midnight on 20 December every year
- 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. To date 42 GFPs have been issued for use under this condition
- 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 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 just 6 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
- The recent low market prices for spanner crab.

Catch statistics

The fishery is predominantly a commercial fishery (99%), with the recreational and charter sectors combined taking less than 1% of the total harvest in 2009. There is no evidence to suggest Indigenous harvest of spanner crabs.

Commercial

Fisheries Queensland will be assessing catch per unit effort (CPUE) for the Spanner Crab Fishery using dilly lifts as the primary indicator of fishing effort. This will align the Annual Status Report with the Spanner Crab Stock Assessment and TAC Review documents (e.g. Brown 2010) which use dilly lifts as the preferred index of effort. However, in this report both dilly lifts and fishing days are included in graphs. Future Spanner Crab Fishery Annual Status Reports will present catch rate estimates based solely on dilly lifts.

Between 2008 and 2009 the annual reported commercial spanner crab landings in Queensland decreased by more than 35%, from 1 584 t in 2008 to 1 003 t in 2009 (Table 1); principally as a result of an 18.5% reduction in the number of fishing days.

Table 1: Catch and effort data for the commercial harvest of spanner crabs, 1999–2009 (Source: Fisheries Queensland CFISH database, 11 March 2010).

Year	Licences	Days	Dilly Lifts	Weight (t)
1999	139	7 124	1 942 986	1 822
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	6 054	1 451 545	1 543
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	1 080 684	1 584
2009	67	3 240	871 031	1 003

Logbook data continue to show high catches of spanner crabs in September and October. Catches during these months contributed approximately 25% to the total spanner crab commercial landings in 2009.

CPUE calculated as kg/dilly lift decreased from 1.47 kg/dilly lift in 2008 to 1.15 kg/dilly lift in 2009. Similarly CPUE calculated using kg/day decreased from 398 kg/day in 2008 to 309 kg/day in 2009. Both estimates of CPUE declined by 22% between 2008 and 2009; levels are the lowest recorded since 2005 (Figure 2 and 3). Both CPUE curves follow the same general trend and indicate a decrease in population abundance following the high landings associated with 2006–08. Recent change may also be associated with a decrease in market demand, which has placed catch restrictions on the fleet.

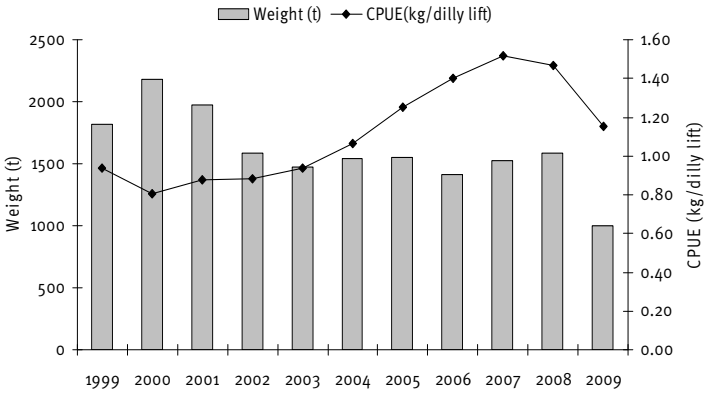

Figure 2: Total commercial catch and CPUE in the Spanner Crab Fishery 1999–2009 (Source: Fisheries Queensland CFISH database, 11 March 2010).

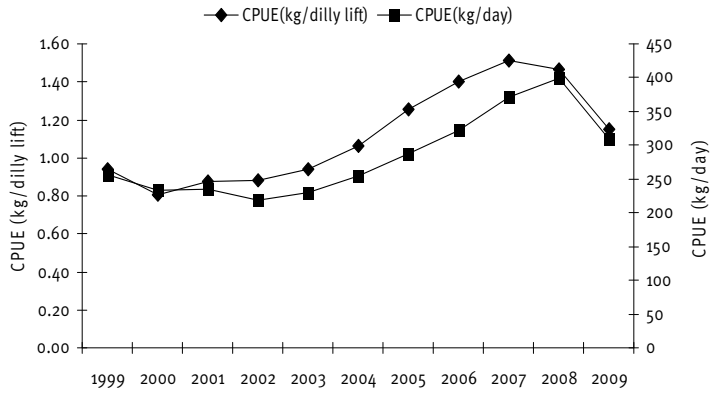

Figure 3: CPUE by kg/dilly lift and kg/day in the Spanner Crab Fishery 1999–2009 (Source: Fisheries Queensland CFISH database, 11 March 2010).

In 2009, Managed Area A (C2 endorsements) was responsible for 99.5% 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 2009, 5.5 t of spanner crabs were harvested in Managed Area B (C3 endorsements). During the two

previous years there had been no reported catch of spanner crabs from Managed Area B.

Regions

Catches from Regions 3, 4 and 6 were lower in 2009 than 2008 by 49%, 40% and 36% respectively, contributing significantly to the reduced total spanner crab landings in 2009 (Figure 4).

During 2009, spanner crab landings in some regions (particularly Region 4 off Double island Point and the Sunshine Coast) were affected by an infestation of toadfish (probably *Lagocephalus cheesemanii*) which appeared with an influx of unusually cold and turbid water. The toadfish negatively impacted catches and catch rates by damaging bait bags and removing bait, and by attacking and damaging crabs on dillies (Brown 2010).

Other factors such as poor weather early in the season and low market prices for spanner crab are also thought to have contributed to the decreased catch levels.

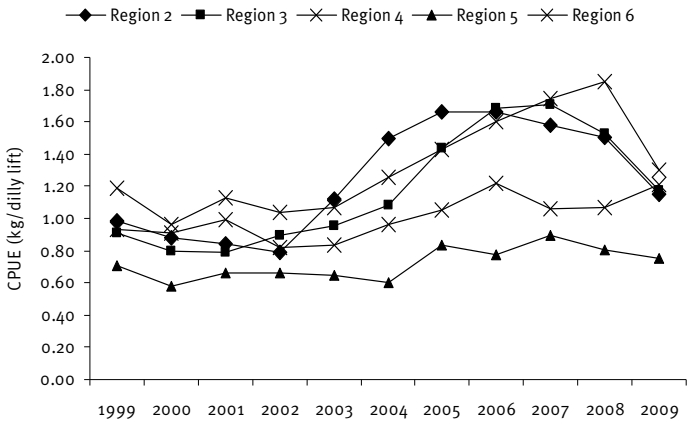

Figure 4: CPUE (kg/dilly lift) of the locations associated with Managed Area A in the Spanner Crab Fishery 1999–2009. (Source: Fisheries Queensland CFISH database, 11 March 2010).

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 were responsible for a quarter of one percent 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 will commence 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 should be available by the end of 2011.

Charter

Data from charter logbooks indicated that the charter sector caught a total of 10.5 t of spanner crab (7.4 t retained and 3.1 t released) in 2009, which equates to only 0.7% 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 2009, the majority of the spanner crab catch (70%) was taken from waters south of Baffle Creek (24.5° S).

The most productive regions were offshore from Double Island Point and Gladstone; followed closely by the area north of Hervey Bay, Fraser Island and the Sunshine Coast (Figure 5).

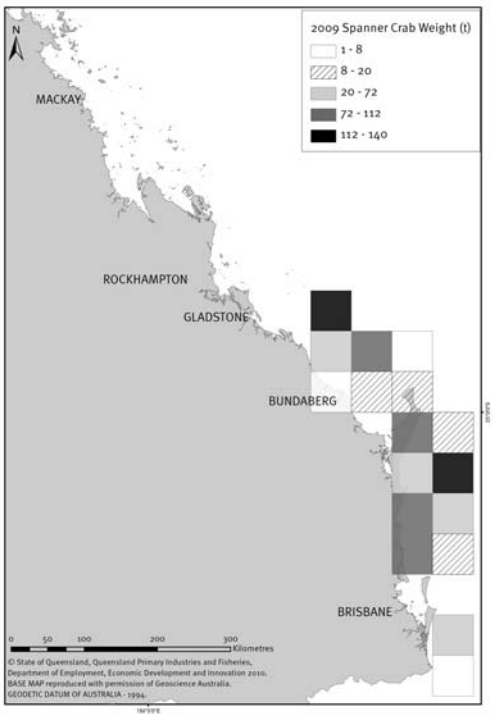

Figure 5: Spatial distribution of commercial catch (tonnes) in the Spanner Crab Fishery in 2009 (Source: Fisheries Queensland CFISH database, 11 March 2010).

The high catch associated with the offshore regions by Double Island Point and Gladstone is thought to be factors of environment productivity and concentration of fishing effort. These areas are favoured by larger boats as

they are less intensively fished, being less accessible to smaller boats, particularly in poor weather.

Socio-economic characteristics and trends

Prices paid to fishers for spanner crabs fluctuate between $4/kg and $8/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 2009 was $4.50/kg. There have been no significant upward or downward trends in prices over the last seven years.

In 2009, 42% of the licences holding a C2 and/or C3 symbol generated their entire annual fishing income from the Spanner Crab Fishery (Figure 6). This indicates a 23% drop between 2008 and 2009 in licences which are earning their sole income through the harvest of spanner crabs; indicating that a number of fishers have chosen to substitute their declining spanner crab revenue through alternative fisheries.

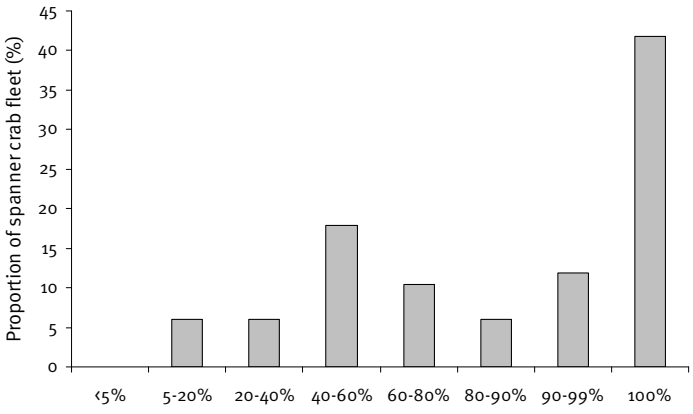

Figure 6: Contribution of spanner crab harvest to fishing vessel's annual fishing income in 2009 (Source: Fisheries Queensland CFISH database, 11 March 2010).

Approximately 72% of fishers who operate in the Queensland Spanner Crab Fishery earn between $10 000 and $100 000 per annum (Figure 7). An additional 13% fall into the lower income categories grossing under $5000, suggesting that a minority 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, 15% of fishermen are earning over $100 000. Income estimates have decreased between 2008 and 2009, with fewer fishers earning in the higher bracket ($100–400 000).

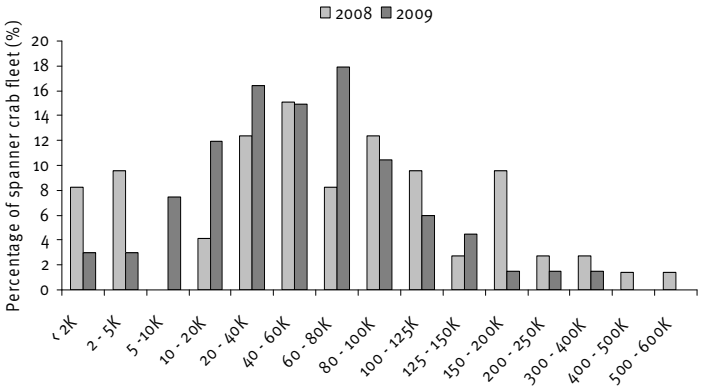

Figure 7: Income distribution of licence holders in the Spanner Crab Fishery in 2008 and 2009 (Source: Fisheries Queensland CFISH database, 11 March 2010).

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 endorsed fishery and in New South Wales as part of the Long Term Monitoring Program's (LTMP) cross-jurisdictional collaborative arrangement. Between 2000 and 2009, the LTMP fishery independent spanner crab survey has undertaken approximately 33 600 and 3 000 individual dilly lifts, in Queensland and New South Wales respectively. In Queensland, 80% of the overall catch was males, compared with New South Wales where only 46% were males.

Fewer crabs were caught during the 2009 Queensland survey than in 2008. This has been the first major decline in the number of crabs caught since 2002 (Table 2) and is attributed partly to an expected downturn in the crabs natural abundance cycle (in Region 4 particularly) and damage to the sampling equipment by an unusual density of toadfish. In the New South Wales survey area, the numbers of crabs caught was slightly higher than in 2008 (Table 3).

The sampling design includes five assessment regions within the Queensland commercial fishery (Managed Area A), which is subject to the commercial TAC. From 2005 onwards an extra survey region in New South Wales was included.

A breakdown of annual standardised catch rate by region is shown in Figure 7. In Queensland, catch rates during the 2009 survey were lower than the previous year in all management regions. As discussed previously, the dramatic fall in catch rate for Region 4 was most likely

due to the large numbers of toadfish in the survey area. In the New South Wales survey area, catch rates have remained stable since 2005.

Table 2: The number of crabs caught each year during LTMP 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

Table 3: The number of crabs caught each year during LTMP 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

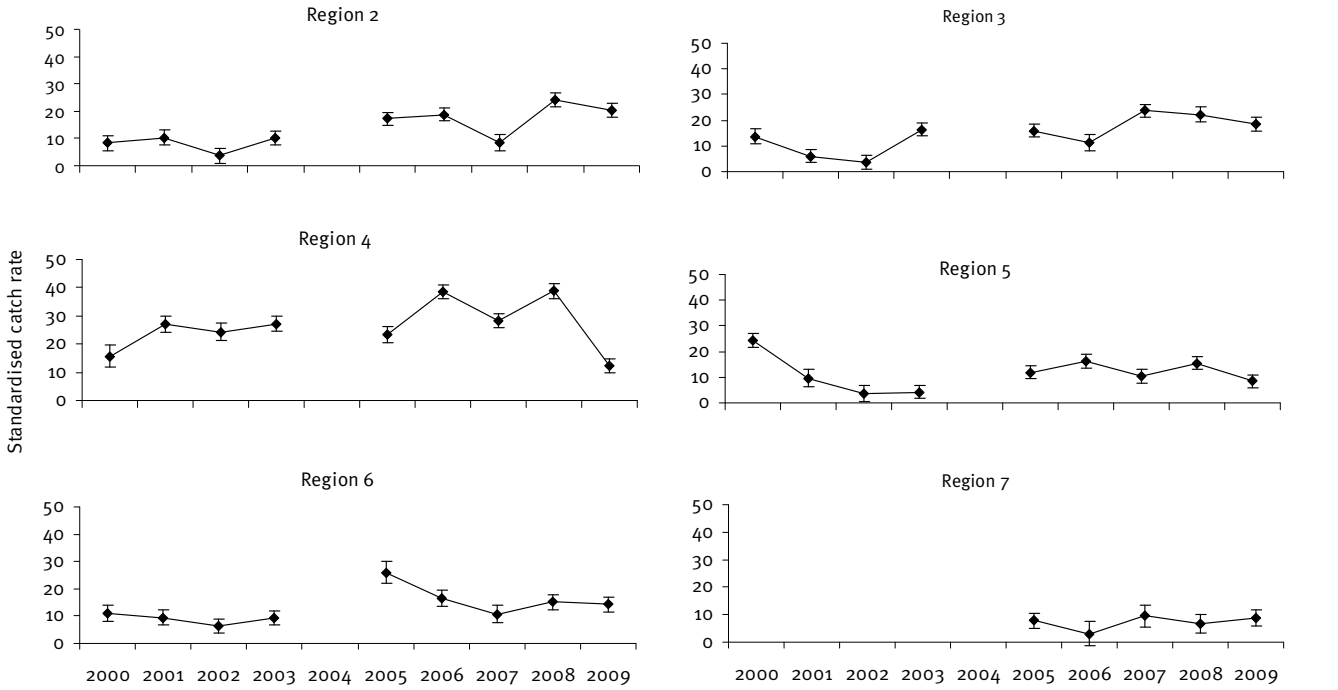

Figure 7: Modelled mean catch rate (crabs per string) of spanner crabs by management area and year, from Long Term Monitoring Program fishery independent surveys. Error bars are standard error.

Interactions with protected species

An interaction is any physical contact an individual has with a protected species. In 2009 the Spanner Crab Fishery reported one interaction with a species of conservation interest. The reported interaction was with a humpback whale (released alive).

Ecosystem Impacts

The impact of the fishery on the ecosystem is considered to be low. The fishing apparatus used (dillies) have little impact on the physical environment as they are lightweight and stable and because they are 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 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 2009 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(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) 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(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 indicant a significant decline in spanner crab catches. 2(b) *Triggered* The annual reported commercial spanner crab catch in Queensland decreased significantly from 1584 t in 2008 to 1003 t in 2009; this accounts for more than a 35% 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) *Triggered* The annual reported commercial spanner crab catch in Management Area A decreased significantly from 1584 t in 2008 to 997 t in 2009; this accounts for more than a 37% 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 2010–2011 to align with the department's Fisheries Performance Measurement System framework (located at: http://www.dpi.qld.gov.au/28_11060.htm).

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) of the impacts of the fishery on the benthic community and target and bycatch species was undertaken to assess whether the fishery continues to be managed in an ecologically sustainable manner. The ERA indicated that the risk to bycatch and to the benthic community were negligible to minor. The Spanner Crab Fishery ERA is scheduled for review in 2010–11.

Fisheries Queensland have recently developed and implemented a stock status reporting framework (a copy of the final report can be found at: http://www.dpi.qld.gov.au/28_16916.htm) which uses defined exploitation criteria to determine the status of a stock using current biological information, independent and dependent monitoring data, and fishery logbook data. In May 2010, a stock status workshop was held to discuss the status of spanner crab stocks. A suite of information was considered; size frequency data, commercial logbook catch and catch rates, recreational and charter estimates, SAG stock indicator TAC review reports and expert knowledge on biological characteristics of the species in question. From the information presented Fisheries Queensland experts and representatives were able to make an assessment of the east coast spanner crab stock and determine an exploitation status. The east coast spanner stock was considered to be 'Not Fully Utilised' under the current management regime considering that current catch levels are significantly less than historically sustained levels, size frequency graphs showed healthy distribution of individuals across carapace classes and the TAC is underutilised and has not been reached at any time during the past decade.

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 and O'Neill et al. (in press)) 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. (in press) 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 total allowable catch.

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 cameras (BRUCs) 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 within 'Biological and ecological information'.

Fishery Management

Compliance Report

During 2009, 117 units, including 94 commercial fishing vessels were inspected in the Spanner Crab Fishery. From the inspections conducted in the commercial and recreational sectors, 18 offences were detected and 10 units were deemed to be non-compliant, corresponding to a compliance rate of 89.7% on units inspected (Table 5).

Offences are reported as either a Fisheries Infringement Notice (FIN) or Caution (FIN Caution or official written caution).

The compliance risk assessment for this fishery was reviewed in February 2009 in order to determine compliance priorities and allow the most effective use of Queensland Boating and Fisheries Patrol (QBFP) resources. The assessment identified the following activities in the Spanner Crab Fishery as having the highest level of risk. The QBFP will therefore direct their compliance resources to addressing:

- Continuing to fish once the ITQ has been used in MAA
- Misreporting of catch amount for ITQ deduction
- Interference with fishing apparatus.

There are also a number of activities rated as moderate risk, which will be addressed, but at a lower priority. Detailed strategies to address the risks identified by this assessment have been developed through QBFP strategic and operational planning processes. The risk assessment will be reviewed every three to five years or earlier if there are major changes to the management arrangements for the fishery.

Table 5: Offences recorded in the commercial and recreational sectors (combined) of the Spanner Crab Fishery (2009).

OFFENCE	FIN	Caution
Take, possess or sell regulated fish	1	-
Contravened a quota	1	1
Contravened a regulated waters declaration	-	1
Contravened a condition of an authority involving boatmarks	1	2
Contravened a condition of an authority involving quota requirements	-	1
Contravened a condition of an authority involving use of fishing apparatus	3	1
Failed to produce a document required to be available for inspection	-	1
Failed to comply with an information requirement	4	3
TOTAL	**10**	**10**

Changes to management arrangements in the reporting year

There were no changes to management arrangements during 2009.

Communication and education

Promotion of regulations applying to both commercial and recreational fishers, including those relating to spanner crabs, is an ongoing role for Fisheries Queensland.

Consultation with stakeholders in this fishery occurs through many mechanisms:

- On a strategic level the Queensland Fisheries Advisory Committee (QFAC) may consider the Spanner Crab Fishery in the context of all Queensland fisheries and prioritises issues associated with it accordingly. Once fisheries management priorities have been determined, the department may establish a small number of Technical Advisory Groups (TAGs) to provide technical information that will assist Fisheries

Queensland to pursue these priorities (which may or may not impact the Spanner Crab Fishery).

- Fisheries Queensland may also establish technical working groups to generate information upon which to base decisions. These groups may be permanent or adhoc and can be fishery-specific or broader. They may be established to provide advice to Fisheries Queensland or to inform the decisions of a body such a QFAC.
- Fisheries Queensland consults directly with industry members through attendance at industry association meetings, port visits, newsletters and other means.

There are also legislated requirements for consultation such as Regulatory Assessment Statements (RAS) that ensure stakeholders in the fishery are consulted about significant changes in management arrangements.

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 NSW counterparts towards complementary monitoring and research. In 2009, NSW DPI and Fisheries Queensland continued their annual cross-border fishery-independent survey, covering the entire east coast spanner crab stock.

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Acknowledgements

Dr Ian Brown, Jason McGilvray, Mick O'Neill, Phillip Gaffney, Dr Tracey Scott-Holland and Lew Williams.

Front cover image

Spanner crab *(Ranina ranina)*