



Australian Government

Department of the Environment and Heritage

Assessment of the
Queensland Spanner Crab Fishery

January 2007

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Disclaimer

This document is an assessment carried out by the Department of the Environment and Heritage of a commercial fishery against the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries*. It forms part of the advice provided to the Minister for the Environment and Heritage on the fishery in relation to decisions under Parts 13 and 13A of the *Environment Protection and Biodiversity Conservation Act 1999*. The views expressed do not necessarily reflect those of the Minister for the Environment and Heritage or the Australian Government.

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Table 1: Summary of the Queensland (QLD) Spanner Crab Fishery

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| <p>Publicly available information relevant to the fishery</p> | <ul style="list-style-type: none"> • QLD Fisheries Act 1994 • QLD Fisheries Regulation 1995 • Great Barrier Reef Marine Park Act 1975 • QLD Marine Parks Act 1982 • Annual Status Report 2005 – QLD Spanner Crab Fishery • Annual Status Report – QLD Spanner Crab Fishery, 2006 • Fisheries Long Term Monitoring Program – summary of spanner crab (<i>Ranina ranina</i>) survey results: 2000-2005 |
| <p>Area</p> | <p>The area of the Spanner Crab Fishery encompasses the waters off QLD from the New South Wales (NSW) border to the Northern Territory border. However, fishing effort is concentrated in coastal waters up to 80 m depth between Yeppoon in central QLD and the QLD/NSW border (in Managed Area A).</p> <p>The commercial fishery is divided into two areas – Managed Area A and Managed Area B. Each area is subject to a different set of management arrangements.</p> |
| <p>Fishery status</p> | <p>The 2006 Annual Status Report for the Spanner Crab Fishery notes that Catch-Per-Unit-Effort (CPUE) has been generally trending upwards since 2002, suggesting an increase in the spanner crab population in Queensland waters. This finding is supported by results of the Long Term Monitoring Program (LTMP).</p> <p>There are no resource concerns for this species.</p> |
| <p>Target Species</p> | <p>Spanner Crab (<i>Ranina ranina</i>) under quota management arrangements.</p> |
| <p>Byproduct Species</p> | <p>None.</p> |
| <p>Gear</p> | <p>Dillies of specific dimensions are used in the commercial fishery. A maximum of 45 and 30 dillies may be used in Managed Areas A and B respectively.</p> <p>Recreational fishers are permitted to use a maximum of four collapsible traps, inverted dillies or crab pots.</p> |
| <p>Season</p> | <p>A spawning season closure applies to all fishers from midnight on 20 November to midnight on 20 December every year.</p> |
| <p>Commercial harvest 2005</p> | <p>1452.2 tonnes (t). From 1998 to 2002 catch fluctuated between 1500 and 2000 t. Since then, catches have been more stable, but trending downwards. It is believed that this is associated with the reduction of the Total Allowable Catch (TAC) in 2002 and reduced commercial effort in the fishery in response to a decrease in market demand.</p> |
| <p>Commercial Gross Value of Production 2005</p> | <p>\$5.1 million.</p> |
| <p>Take by other sectors</p> | <p>In 2002, approximately 5 t taken by the recreational sector. Managed by season closure, gear restrictions (type and number), possession limit, minimum size limit and prohibition on the take of egg-bearing female crabs.</p> |

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| Commercial licences issued | 239 C2 licences (required to fish in Managed Area A) and 421 C3 licences (required to fish in Managed Area B). 156 operators hold both C2 and C3 licences, resulting in a total of 504 operators licenced to access the fishery. 90 fishers were active in 2005. |
| Management arrangements | <p>The fishery is managed under the <i>Fisheries (Spanner Crab) Management Plan 1999</i> (Spanner Crab Management Plan), the <i>Queensland Fisheries Act 1994</i> and the <i>Queensland Fisheries Regulation 1995</i>. General Fisheries Permits have also been issued under the <i>Fisheries Regulation 1995</i> to allow three operators to use double the amount of dillies permitted under the Spanner Crab Management Plan, and to use larger boats.</p> <p><u>Output controls</u></p> <ul style="list-style-type: none"> • Managed Area A managed through a TAC and Individual Transferable Quota (ITQ) system. • Managed Area B has a daily quota of 16 baskets. • Catch must be unloaded before fishing operations moved from one managed area to the other. • Possession limit of 20 spanner crabs for recreational fishers. • Minimum size limit of 10 cm carapace length. If the carapace is damaged or missing, a minimum size limit of 3.7 cm sternite length applies. • Prohibition on the take of egg-bearing female spanner crabs. <p><u>Input controls</u></p> <ul style="list-style-type: none"> • Boat restrictions apply to commercial fishers. • Spawning season closure. • Number of dillies permitted to be used and trotline configuration specified for each Managed Area. • Gear limits for recreational fishers. |
| Export | Majority of product exported live to East Asia. |
| Bycatch | Low – limited to small amounts of finfish, shells, sea cucumber, sea urchin, crabs, octopus and star fish. Over three survey years of the LTMP, only 1874 individual animals were caught and, in the main, were released with high survival expectancy (McGilvray <i>et al.</i> , 2006). |
| Interaction with Protected Species | Over three survey years of the LTMP, interactions with protected species were only observed for syngnathids (McGilvray <i>et al.</i> , 2006). Limited interactions with sea snakes, water rats, humpback whales and saltwater crocodiles have been reported through the Species of Conservation Interest (SOCI) logbooks, although it is likely that the interactions with the saltwater crocodiles and water rats were reported by fishers targeting mud crabs. The seasnakes and humpback whale were all reportedly released alive. |

Table 2: Progress in implementation of recommendations made in initial assessment of the QLD Spanner Crab Fishery

| Recommendation | Progress | Recommended Action |
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| Establish arrangements with NSW to establish joint monitoring and assessment of the shared stock of spanner crabs with a view to developing future collaborative management arrangements. | A Fisheries Research and Development Corporation (FRDC) Project (2003/046) has been developed to establish joint monitoring arrangements between QLD and NSW. The first joint survey was completed in May 2006. | The Department of the Environment and Heritage (DEH) has recommended that the Department of Primary Industries and Fisheries (DPI&F) ensure that management arrangements for the shared spanner crab stock with NSW take into account results of the collaborative monitoring project once available. (Recommendation 2, Table 4). |
| Periodically review the compliance and enforcement strategy and activities to ensure emerging compliance risks are identified and addressed. Particular attention should be given to the validation of CPUE data. | A compliance risk assessment has been completed for the Spanner Crab Fishery. | DEH has recommended that DPI&F develop a compliance strategy for the Spanner Crab Fishery addressing high risks identified in the compliance risk assessment, particularly those relating to data reliability (Recommendation 3, Table 4). |
| Continue work to develop a stock assessment model based on sound biological data, and an analysis of the impact of effort creep on the current total allowable commercial catch setting process and management responses. | DPI&F advise that current assessment model and decision rules will be reviewed in 2006–07 to assess how methodology could be amended to better account for natural variation in abundance and the effects of changes in effective fishing effort. | DEH has recommended that DPI&F develop an improved method of estimating abundance of the spanner crab stock that takes into account relevant information on the biological characteristics of spanner crabs, changing fisher behaviour and increased effort in the fishery (Recommendation 4, Table 4). |
| Review the Managed Area A/Managed Area B boundary location to ensure that it is not compounding risks associated with CPUE and individual transferable quota reporting. | DPI&F advise that minimal commercial catches were recorded for Managed Area B. | None. DEH suggests that, if commercial catches of spanner crab in Managed Area B significantly increase, DPI&F review available data and ensure there are no risks to data reliability. |

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| <p>Develop an appropriate means of monitoring bycatch in the fishery in addition to the LTMP.</p> | <p>Not completed due to DEH's agreement to amend recommendation (see next column).</p> | <p>None. At the time of making this recommendation, the LTMP was not ongoing and this led to DEH raising concerns about a lack of bycatch monitoring in the Spanner Crab Fishery. DEH has since agreed that regular bycatch monitoring undertaken as part of the LTMP satisfies DEH's requirements for monitoring bycatch without the need for any additional arrangements. The recommendation was changed to read "DPI&F to develop an appropriate means of monitoring bycatch in the fishery".</p> |
| <p>Establish a reporting mechanism for protected species interactions, including the development of a protocol for reporting of interactions of protected marine species to Environment Australia as required under the <i>Environment Protection Biodiversity Conservation Act 1999</i> (EPBC Act), and the development of a program to educate fishers about protected species. If it is revealed that interactions occur more frequently than previously thought, mitigation measures, including trigger and reference points, should be introduced to reduce interactions.</p> | <p>A SOCI logbook was implemented in the Spanner Crab Fishery in August 2006 and quarterly reports on any interactions are provided to DEH by DPI&F. A comprehensive protected species education program was released in September 2005. This material was provided to all licensed commercial fishers and is available through the DPI&F Business Information Centre.</p> | <p>DEH considers that DPI&F has met this recommendation. The level of interaction with protected species has been shown to be extremely low, both through SOCI logbook reporting and as part of the results of the LTMP. If the frequency of protected species interactions were to increase in the future, DEH is confident that adequate systems are in place to detect such an increase, and encourages DPI&F to pursue the development of mitigation measures, performance measures and performance indicators in that event.</p> |
| <p>Undertake a formal risk assessment of the ecological impact of the fishery on predator prey relationships before the next assessment to confirm assumptions that the broad ecosystem effects of the fishery are low.</p> | <p>An ecological risk assessment (ERA) workshop for the Spanner Crab Fishery was held in May 2006. Outcomes were presented to the Crab Management Advisory Committee for endorsement in August 2006. A summary of the ERA was submitted to DEH in January 2007.</p> | <p>DEH has recommended that DPI&F implement management responses for risks ranked as 'moderate' or above in the Spanner Crab ERA (Recommendation 6, Table 4).</p> |

Table 3: DEH’s assessment of the QLD Spanner Crab Fishery against the requirements of the EPBC Act related to decisions made under Parts 13 and 13A

Part 13

| Section 208A Minister may accredit plans or regimes | DEH assessment of the QLD Spanner Crab Fishery |
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| <p>Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(b) a plan of management for a fishery made by a State or self-governing Territory and that is in force in the State or Territory;</p> <p>if satisfied that:</p> <p>(d) the plan or regime requires persons engaged in fishing under the plan or regime to take all reasonable steps to ensure that members of listed threatened species are not killed or injured as a result of the fishing; and</p> | <p>The QLD Spanner Crab Fishery will be managed under the Spanner Crab Management Plan, the Queensland <i>Fisheries Act 1994</i> and the Queensland <i>Fisheries Regulation 1995</i>.</p> <p>The Spanner Crab Management Plan was accredited in February 2002. The management arrangements for the fishery have not significantly changed since this accreditation was granted. However, in the initial assessment, only the Spanner Crab Management Plan was accredited under Part 13, and therefore the operators operating under recently issued General Fisheries Permits (GFPs) are not exempt from the offence provisions of Part 13. DEH considers that the use of extra dillies, as allowed under the permits, is unlikely to represent a significant impact on protected species given the existing extremely low rate of interaction. In addition, DPI&F has implemented a protected species education program as well as a reporting mechanism for interactions since the last assessment, which will enable them to gather more reliable information on the nature and frequency of protected species interactions and respond appropriately. DEH therefore believes it appropriate to accredit the management regime for the fishery, including the Spanner Crab Management Plan and the <i>Fisheries Regulation 1995</i>, under Part 13 of the EPBC Act.</p> |

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| <p>(e) the fishery to which the plan or regime relates does not, or is not likely to, adversely affect the survival or recovery in nature of the species.</p> | <p>Currently, evidence suggests that the QLD Spanner Crab Fishery only has minimal interactions with listed threatened species. Therefore, DEH considers the current operation of the QLD Spanner Crab Fishery is not likely to adversely affect the survival or recovery in nature of any threatened species.</p> |
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| Section 222A Minister may accredit plans or regimes | DEH assessment of the QLD Spanner Crab Fishery |
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| <p>Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(b) a plan of management for a fishery made by a State or self-governing Territory and that is in force in the State or Territory;</p> <p>if satisfied that:</p> <p>(d) the plan or regime requires persons engaged in fishing under the plan or regime to take all reasonable steps to ensure that members of listed migratory species are not killed or injured as a result of the fishing; and</p> | <p>The QLD Spanner Crab Fishery will be managed under the Spanner Crab Management Plan, the Queensland <i>Fisheries Act 1994</i> and the Queensland <i>Fisheries Regulation 1995</i>.</p> <p>The Spanner Crab Management Plan was accredited in February 2002. The management arrangements for the fishery have not significantly changed since this accreditation was granted. However, in the initial assessment, only the Spanner Crab Management Plan was accredited under Part 13, and therefore the operators operating under recently issued GFPs are not exempt from the offence provisions of Part 13. DEH considers that the use of extra dillies, as allowed under the permits, is unlikely to represent a significant impact on protected species given the existing extremely low rate of interaction. In addition, DPI&F has implemented a protected species education program as well as a reporting mechanism for interactions since the last assessment, which will enable them to gather more reliable information on the nature and frequency of protected species interactions and respond appropriately. DEH therefore believes it appropriate to accredit the management regime for the fishery, including the Spanner Crab Management Plan and the <i>Fisheries Regulation 1995</i>, under Part 13 of the EPBC Act.</p> |

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| <p>(e) the fishery to which the plan or regime relates does not, or is not likely to, adversely affect the survival or recovery in nature of a listed migratory species.</p> | <p>The report provided by DPI&F indicates that there has been one interaction between crab fishers and a migratory whale. However, this animal was released alive and it is uncertain whether the interaction occurred in the Spanner Crab Fishery since the system is currently unable to differentiate reported interactions between the three QLD crab fisheries. Therefore, DEH considers the current operation of the QLD Spanner Crab Fishery is not likely to adversely affect the survival or recovery in nature of any listed migratory species.</p> |
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| Section 245 Minister may accredit plans or regimes | DEH assessment of the QLD Spanner Crab Fishery |
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| <p>Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(b) a plan of management for a fishery made by a State or self-governing Territory and that is in force in the State or Territory;</p> <p>if satisfied that:</p> <p>(c) the plan or regime requires persons engaged in fishing under the plan to take all reasonable steps to ensure that cetaceans are not killed or injured as a result of the fishing; and</p> | <p>The QLD Spanner Crab Fishery will be managed under the Spanner Crab Management Plan, the Queensland <i>Fisheries Act 1994</i> and the Queensland <i>Fisheries Regulation 1995</i>.</p> <p>The Spanner Crab Management Plan was accredited in February 2002. The management arrangements for the fishery have not significantly changed since this accreditation was granted. However, in the initial assessment, only the Spanner Crab Management Plan was accredited under Part 13, and therefore the operators operating under recently issued GFPs are not exempt from the offence provisions of Part 13. DEH considers that the use of extra dillies, as allowed under the permits, is unlikely to represent a significant impact on protected species given the existing extremely low rate of interaction. In addition, DPI&F has implemented a protected species education program as well as a reporting mechanism for interactions since the last assessment, which will enable them to gather more reliable information on the nature and frequency of protected species interactions and respond appropriately. DEH therefore believes it</p> |

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| <p>(d) the fishery to which the plan relates does not, or is not likely to, adversely affect the conservation status of a species of cetacean or a population of that species.</p> | <p>appropriate to accredit the management regime for the fishery, including the Spanner Crab Management Plan and the <i>Fisheries Regulation 1995</i>, under Part 13 of the EPBC Act.</p> <p>The report provided by DPI&F indicates that there has been one interaction with a Humpback whale in the Spanner Crab Fishery and that the animal was released alive. Therefore, DEH considers the current operation of the QLD Spanner Crab Fishery is not likely to adversely affect the conservation status of a species of cetacean or a population of that species.</p> |
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| Section 265 Minister may accredit plans or regimes | DEH assessment of the QLD Spanner Crab Fishery |
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| <p>Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(b) a plan of management for a fishery made by a State or self-governing Territory and that is in force in the State or Territory;</p> <p>if satisfied that:</p> <p>(c) the plan requires persons engaged in fishing under the plan to take all reasonable steps to ensure that members of listed marine species are not killed or injured as a result of the fishing; and</p> | <p>The QLD Spanner Crab Fishery will be managed under the Spanner Crab Management Plan, the Queensland <i>Fisheries Act 1994</i> and the Queensland <i>Fisheries Regulation 1995</i>.</p> <p>The Spanner Crab Management Plan was accredited in February 2002. The management arrangements for fishery the have not significantly changed since this accreditation was granted. However, in the initial assessment, only the Spanner Crab Management Plan was accredited under Part 13, and therefore the operators operating under recently issued GFPs are not exempt from the offence provisions of Part 13. DEH considers that the use of extra dillies, as allowed under the permits, is unlikely to represent a significant impact on protected species given the existing extremely low rate of interaction. In addition, DPI&F has implemented a protected species education program as well as a reporting mechanism for interactions since the last assessment, which will enable them to gather more reliable</p> |

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| <p>(d) the fishery to which the plan relates does not, or is not likely to, adversely affect the conservation status of a listed marine species or a population of that species.</p> | <p>information on the nature and frequency of protected species interactions and respond appropriately. DEH therefore believes it appropriate to accredit the management regime for the fishery, including the Spanner Crab Management Plan and the <i>Fisheries Regulation 1995</i>, under Part 13 of the EPBC Act.</p> <p>Currently, evidence suggests that the QLD Spanner Crab Fishery only has minimal interactions with listed marine species (2 seasnakes released alive and syngnathids). Therefore, DEH considers the current operation of the QLD Spanner Crab Fishery is not likely to adversely affect the conservation status of a listed marine species or a population of that species.</p> |
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Part 13A

| Section 303DC Minister may amend list | DEH assessment of the QLD Spanner Crab Fishery |
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| <p>Minister may, by instrument in published in the Gazette, amend the list referred to in section 303DB (list of exempt native specimens) by:</p> <p>(a) including items in the list;</p> | |
| <p>In deciding whether to amend the list referred to in section 303DB (List of Exempt Native Specimens [LENS]) to include a specimen derived from a commercial fishery, the Minister must rely primarily on the outcomes of any assessment in relation to the fishery carried out for the purposes of Division 1 or 2 of Part 10.</p> | <p>No assessment of the QLD Spanner Crab Fishery has been carried out under Part 10 of the EPBC Act.</p> |
| <p>The above does not limit the matters that may be taken into account in deciding whether to amend the list referred to in section 303DB (list of exempt native specimens) to include a specimen derived from a commercial fishery.</p> | <p>It is not possible to list exhaustively the factors that you may take into account in amending the LENS. The objects of Part 13A, which are set out below this table, provide general guidance in determining factors that might be taken into account. A matter that is relevant to determining whether an amendment to the list is consistent with those</p> |

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| | <p>objects is likely to be a relevant factor.</p> <p>DEH considers that the amendment of the LENS to include product taken in the QLD Spanner Crab Fishery would be consistent with the provisions of Part 13A as:</p> <ul style="list-style-type: none"> ▪ the fishery will not harvest any Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) listed species; ▪ there are management arrangements in place to ensure that the resource is being managed in an ecologically sustainable way (see Table 1). ▪ the operation of the QLD Spanner Crab Fishery is unlikely to be unsustainable and threaten biodiversity within the next 5 years; and ▪ the EPBC Regulations 2000 do not specify fish as a class of animal in relation to the welfare of live specimens. |
| <p>Before amending the list referred to in section 303DB (list of exempt native specimens), the Minister:</p> <ul style="list-style-type: none"> (a) must consult such other Minister or Ministers as the Minister considers appropriate; and (b) must consult such other Minister or Ministers of each State and self-governing Territory as the Minister considers appropriate; and (c) may consult such other persons and organisations as the Minister considers appropriate. | <p>The public comment period on the Department of Primary Industry and Fisheries' submission sought comment on the 2005 and 2006 Annual Status Reports for the QLD Spanner Crab Fishery and provided sufficient opportunity for consultation with other persons and organisations.</p> <p>The letter, at <u>Attachment C</u> of the brief, to the Hon Tim Mulherin MP, QLD Minister for Primary Industries and Fisheries advises him of the intention to declare the fishery exempt from the export provisions of the EPBC Act.</p> |

| Section 303FR Public consultation | DEH assessment of the QLD Spanner Crab Fishery |
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| <p>Before making a declaration under section 303FN, the Minister must cause to be published on the Internet a notice:</p> <ul style="list-style-type: none"> (a) setting out the proposal to make the declaration; and (b) setting out sufficient information to enable persons and organisations to consider adequately the merits of the proposal; and (c) inviting persons and organisations to give the Minister, within the period specified in the notice, written comments about the proposal. | <p>Under the EPBC Act, a decision to amend the LENS does not require a public consultation period. However, a public notice, which set out the proposal to grant export approval to the QLD Spanner Crab Fishery and included the 2005 and 2006 Annual Status Reports for the Spanner Crab Fishery, was released for public comment which closed on 19 January 2007 with no submissions received.</p> |
| <p>A period specified in the notice must not be shorter than 20 business days after the date on which the notice was published on the Internet.</p> | <p>A public notice, which set out the proposal to grant export approval to the QLD Spanner Crab Fishery and included the 2005 and 2006 Annual Status Reports for the Spanner Crab Fishery was released for public comment on 18 December 2006 and closed on 19 January 2007, a total of 22 business days.</p> |
| <p>In making a decision about whether to make a declaration under section 303FN, the Minister must consider any comments about the proposal to make the declaration that were given in response to the invitation in the notice.</p> | <p>No public comments about the proposal were received.</p> |
| Section 391 Minister must consider precautionary principle in making decisions | DEH assessment of the QLD Spanner Crab Fishery |
| <p>The Minister must take account of the precautionary principle in making a decision under section 303DC and/or section 303FN, to the extent he or she can do so consistently with the other provisions of this Act.</p> | <p>You must consider the precautionary principle when making a decision to include specimens on the LENS.</p> |
| <p>The precautionary principle is that lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage.</p> | |

Objects of Part 13A

- (a) to ensure that Australia complies with its obligations under CITES and the Biodiversity Convention;
- (b) to protect wildlife that may be adversely affected by trade;
- (c) to promote the conservation of biodiversity in Australia and other countries;
- (d) to ensure that any commercial utilisation of Australian native wildlife for the purposes of export is managed in an ecologically sustainable way;
- (e) to promote the humane treatment of wildlife;
- (f) to ensure ethical conduct during any research associated with the utilisation of wildlife; and
- (h) to ensure the precautionary principle is taken into account in making decisions relating to the utilisation of wildlife.

Final recommendations to DPI&F for the QLD Spanner Crab Fishery

The material submitted by DPI&F indicates that the Queensland Spanner Crab Fishery operates in accordance with the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries*. DEH considers that the fishery is well managed and unlikely to have an unacceptable or unsustainable impact on the environment in the short to mid term. Overall, DEH recognises that protection of berried female crabs, presence of a TAC and ITQs in the fishery, a minimum size limit and seasonal closure are conservative and suggest that the fishery is being managed in an ecologically sustainable way.

In making its assessment, DEH considers that the range of management measures are sufficient to ensure that the fishery is conducted in a manner that does not lead to over-fishing and that stocks are not currently overfished. Taking into account the seasonal spawning closure, close monitoring of take by individual fishers and the relatively benign fishing methods employed, DEH considers that fishing operations are managed to minimise their impact on the structure, productivity, function and biological diversity of the ecosystem. Management of the fishery has a history of reacting appropriately to threats to sustainability and DEH is confident that DPI&F will continue to provide this high quality management.

DEH is satisfied that the fishery will not be detrimental to the survival or conservation status of the taxon to which it relates in the short term. Similarly, it is not likely to threaten any relevant ecosystem in the short term. To contain and minimise the risks in the longer term the recommendations listed below have been made. DEH believes that product taken in the fishery should be exempt from the export controls of Part 13A of the EPBC Act, with that exemption to be reviewed in 5 years.

DEH considers that the operation of the fishery does not, or is not likely to, adversely affect the survival in nature of a listed threatened species or population of that species, or the conservation status of a listed migratory species, cetacean or listed marine species or a population of any of those species. DEH also considers that under the management plan operators are required to take all reasonable steps to avoid the killing or injuring of protected species, and the level of interaction under current fishing operations is low. In the initial assessment, only the Spanner Crab Management Plan was accredited under Part 13, and therefore the operators operating under recently issued General Fisheries Permits are not exempt from the offence provisions of Part 13. DEH considers that the use of extra dillies, as allowed under the permits, is unlikely to represent a significant impact on protected species given the existing extremely low rate of interaction. In addition, DPI&F has implemented a protected species education program as well as a reporting mechanism for interaction since the last assessment, which will enable them to gather more reliable information on the nature and frequency of protected species interactions. DEH therefore believes it appropriate to accredit the management regime for the fishery, including the Spanner Crab Management Plan and the *Fisheries Regulation 1995*, under Part 13 of the EPBC Act.

Recommendations are provided below with a brief explanation of the related issue/intent. Unless a specific time frame is provided in the recommendation each recommendation must be addressed within the life of the declaration (5 years).

Table 4: QLD Spanner Crab Fishery Assessment– Summary of Issues and Recommendations January, 2007

| | Issue | Recommendation |
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| 1 | <p><u>General Management</u> Export decisions relate to the arrangements in force at the time of the decision. In order to ensure that these decisions remain valid, DEH needs to be advised of any changes that are made to the management regime and make an assessment that the new arrangements are equivalent or better, in terms of ecological sustainability, than those in place at the time of the original decision.</p> | <p>DPI&F to inform DEH of any intended amendments to the management arrangements that may affect sustainability of the target species or negatively impact on byproduct, bycatch, protected species or the ecosystem.</p> |
| 2 | <p><u>Cross-jurisdictional management</u> DEH notes that, as part of a collaborative FRDC project (2003/046), joint monitoring arrangements between QLD and NSW for the shared spanner crab stock have been developed. This project, and the first survey undertaken in May 2006, partly addresses one of the recommendations made in DEH’s initial assessment of the Spanner Crab Fishery. DEH commends DPI&F for pursuing this collaborative work and considers that DPI&F should take into account the results of this project in managing the shared spanner crab stock.</p> | <p>DPI&F to ensure that management arrangements for the shared spanner crab stock with NSW take account of the results of the collaborative monitoring project, once available.</p> |
| 3 | <p><u>Compliance</u> DEH notes that a compliance risk assessment was completed for the Spanner Crab Fishery in response to the recommendations made in the initial assessment of this fishery. It was recommended that, in conducting the risk assessment, particular attention be given to the validation of CPUE data. In the 2006 Annual Status Report, DPI&F note that the highest priority risks for enforcement and compliance in the fishery include misreporting of catch amount for ITQ deduction and failure to keep required information/providing inaccurate information. Given the reliance on catch and effort information for setting the annual TAC for this fishery, DEH considers that a compliance strategy addressing the high risks identified, particularly those relating to data reliability, should be completed as a priority.</p> | <p>By the end of 2007 DPI&F to develop a compliance strategy for the Spanner Crab Fishery addressing high risks identified in the compliance risk assessment, particularly those relating to data reliability.</p> |

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| <p>4</p> | <p><u>Abundance estimates</u></p> <p>In its first assessment of the Spanner Crab Fishery, DEH recommended that DPI&F develop a stock assessment model based on sound biological data and the impact of effort creep on the TAC setting processes and management responses. It is unclear from the submission how much progress has been made against this recommendation with DPI&F noting that the current assessment model and decision rules will be reviewed in 2006/07 to assess how methodology could be amended to better allow for natural variation in abundance and the effects of changes in fishing behaviour.</p> <p>DEH considers that more reliable abundance estimates are needed, especially to inform the TAC and ITQ setting. In addition, there is still little known about the early life stages and recruitment characteristics of spanner crabs or the impacts of factors such as rising fuel prices and decreasing market value that may be impacting on fishing behaviour (ie fishers tending to remain in one spot rather than moving around the fishery area to catch their quota).</p> | <p>By the end of 2008, DPI&F to develop an improved method of estimating abundance of the spanner crab stock that takes into account relevant information on the biological characteristics of spanner crabs, changing fisher behaviour and increased effort in the fishery.</p> |
| <p>5</p> | <p><u>Spanner Crab Management Plan Review</u></p> <p>DEH notes that a general review of the Spanner Crab Management Plan is required to be conducted at least every 5 years and no later than 9 years after the Plan commenced (1999). DEH understands that a review has not yet been conducted and that one would be due no later than 2008. DEH has some concerns that GFPs are being issued without any assessment of the cumulative impacts of such permits or impacts on the target species or the broader ecosystem. Given that they permit fishers to operate in a manner contrary to the management arrangements outlined in the Spanner Crab Management Plan, DEH considers that prior to issuing GFPs such an assessment should be conducted. DEH has previously advised DPI&F that we expect that GFPs would only be issued on a temporary basis and that, if the permitted operating arrangements were found to not have a negative impact on the target species or broader ecosystem, the arrangements would be formalised. DEH suggests that this could potentially be done as part of the review of the Spanner Crab Management Plan.</p> | <p>DPI&F to undertake an assessment of the impact of operations under GFPs that takes into account the impact of the operations on the target species and broader ecosystem and cumulative impacts of the permits issued, and incorporate this as part of the next review of the Spanner Crab Management Plan.</p> |

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| 6 | <p><u>Ecological Risk Management</u></p> <p>DEH recognises that an ERA for the Spanner Crab Fishery was completed by DPI&F in 2006. The ERA identified that fishing had a moderate impact on the spanner crab population and DPI&F have noted that any impacts ranked as moderate or above will require a management response regarding the mitigation of this risk. DEH commends DPI&F on completing the ERA process for the Spanner Crab Fishery and considers that the implementation of management responses to address moderate-high risks should be given priority.</p> | <p>By mid 2008, DPI&F to implement management responses for risks ranked as 'moderate' or above in the Spanner Crab Ecological Risk Assessment.</p> |
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References

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The State of Queensland, Department of Primary Industries and Fisheries (2005) Annual Status Report 2005 – Queensland Spanner Crab Fishery, 11 pp, Brisbane, Australia.

The State of Queensland, Department of Primary Industries and Fisheries (2006) Annual Status Report – Queensland Spanner Crab Fishery December 2006, 13 pp, Brisbane, Australia.

Acronyms

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| CITES | Convention on International Trade in Endangered Species of Wild Fauna and Flora |
| CPUE | Catch Per Unit Effort |
| DEH | Department of the Environment and Heritage |
| DPI&F | Department of Primary Industries and Fisheries |
| EPBC Act | <i>Environment Protection and Biodiversity Conservation Act 1999</i> |
| ERA | Ecological Risk Assessment |
| FRDC | Fisheries Research and Development Corporation |
| GFPs | General Fisheries Permits |
| ITQs | Individual Transferable Quotas |
| LENS | List of Exempt Native Specimens |
| LTMP | Long Term Monitoring Program |
| NSW | New South Wales |
| QLD | Queensland |
| SOCI | Species of Conservation Interest |
| t | Tonnes |
| TAC | Total Allowable Catch |