

**APPLICATION TO THE DEPARTMENT OF THE ENVIRONMENT AND
WATER RESOURCES ON THE**

Shark Bay Crab Interim Managed Fishery

*Against the Guidelines for the Ecologically Sustainable Management of
Fisheries*

August 2007



Department of Fisheries
Government of Western Australia



Fish for the future

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1. BACKGROUND

The purpose of this report is to update the Department of the Environment and Water Resources (DEW) on changes in the Shark Bay Crab Interim Managed Fishery (the Fishery; formerly the Shark Bay Experimental Crab Fishery) to enable the re-assessment of the Fishery against the *Guidelines for the Ecologically Sustainable Management of Fisheries*, under Part 13 and 13A of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Previous Assessment

In June 2004, the Western Australian Department of Fisheries (the Department) submitted an application to DEW for assessment of the Fishery against the *Guidelines for the Ecologically Sustainable Management of Fisheries*, seeking the continued listing of key species on section 303DB of the EPBC Act.

On 16 November 2004, Ian Creswell, as delegate of the (then) Minister for the Environment and Heritage accredited the fishery as a Wildlife Trade Operation (WTO) pursuant to sections 208A, 222A, 245 and 265 of the EPBC Act for the purposes of Divisions 1, 2, 3 and 4 of Part 13 of the Act. The WTO was approved for three years until 15 November 2007 and subject to three conditions and ten recommendations.

A copy of the Department's application and the DEW assessment report and letter of approval are available on the DEW website at:

<http://www.environment.gov.au/coasts/fisheries/wa/shark-bay/decision.html>

Re- Assessment Process

The documentation attached to enable the re-assessment of the Fishery consists of:

1. a summary of the key changes in the Fishery since 2004;
2. a report addressing the progress of the Fishery against each of the WTO conditions and recommendations;
3. a copy of the Fishery's annual reports, published in the annual [State of the Fisheries Report](#) over the past three years (Appendix 1); and
4. ancillary information to assist in the re-assessment process (FRDC 2001/068 Bellchambers et al. 2005; Appendix 2)."

Should you require any further information, please contact Matt Stadler on (08) 9941 1185 or via email: Matthew.Stadler@fish.wa.gov.au.

2. SUMMARY OF KEY CHANGES IN THE FISHERY SINCE 2004

Implementation of Interim Management Plan

On 1 December 2005, the Shark Bay Crab Fishery Interim Management Plan 2005 (the Plan) was gazetted and became the primary legislation governing the Fishery. A copy of the consolidated management plan is available at: [Shark Bay Crab \(Interim\) Management Plan 2005](#)

The Plan consolidates and supersedes the former management arrangements (i.e. the exemptions and conditions on fishing boat licences) that were used to administer the Fishery during the last WTO assessment, however the substance of those management arrangements is unchanged.

3. CONDITIONS ON THE APPROVED WILDLIFE TRADE DECLARATION FOR THE SHARK BAY CRAB INTERIM MANAGED FISHERY

- 1. Operation of the fishery will be carried out in accordance with the WA Shark Bay Experimental Crab Fishery management regime in force under the *Fish Resources Management Act 1994*;**

The Fishery continues to operate in accordance with the management regime in force under the *Fish Resources Management Act 1994* (FRMA). On 1 December 2005, the Plan was gazetted and became the primary legislation governing the Fishery.

The Plan supersedes the former management arrangements that were used to administer the Fishery during the last WTO assessment, however the substance of those management arrangements is unchanged.

- 2. The Western Australia Department of Fisheries (WADF) will inform the Department of the Environment and Heritage (DEH) of any intended amendments to the WA Shark Bay Experimental Crab Fishery management regime that may affect the sustainability of the target species or negatively impact on byproduct, bycatch, protected species or the ecosystem;**

No amendments to the Fishery management regime have been made that adversely affect the sustainability of the target species or negatively impact on byproduct, bycatch, protected species or the ecosystem.

Reference to the gazettal and implementation of the Plan was made publicly available in the [2005/2006 State of the Fisheries Report](#) (Appendix 1). Implementing the Plan has served to strengthen management control and provided greater tenure and security for operators while maintaining a sustainable level of fishing effort.

- 3. Reports to be produced and presented to DEH annually, and to include:**
 - Information sufficient to allow assessment of the progress of WADF in implementing the recommendations made in the Assessment of the Shark Bay Experimental Crab Fishery 2004 and the commitments made in the Final Application to the Australian Government Department of the Environment and Heritage on the Shark Bay Experimental Crab Fishery;

- A description of the status of the fishery and catch and effort information;
- A statement of the performance of the fishery against objectives, performance indicators and measures once developed;
- Research undertaken or completed relevant to the fishery.

A description of the status of the Fishery, catch and effort information, performance of the fishery against objectives and relevant research is reported annually in the Department's *State of the Fisheries Report*. The three reports since the Fishery's last assessment can be found at Appendix 1 or via the following links:

[2005/2006 State of the Fisheries Report](#)

[2004/2005 State of the Fisheries Report](#)

[2003/2004 State of the Fisheries Report](#)

A more comprehensive review of the fisheries research conducted on the Fishery is presented in the final report on FRDC project no. 2001/068 by Bellchambers *et al.* (2005). (Appendix 2)

4. PROGRESS IN IMPLEMENTING RECOMMENDATIONS

- 1. DFWA to advise DEH of any material change to the SBECF's legislated management regime that could affect the criteria on which EPBC decisions are based, within three months of that change being made.**

Between 1998 and 2005 up to five operators were exempted under section 7 (3) (c) of the *Fish Resources Management Act 1994* (FRMA) from a commercial fishing prohibition in the Shark Bay Marine Park for the purpose of exploring and developing the Fishery. Management control was administered by conditions on fishing boat licences imposed by the CEO under section 69 of the FRMA. Over this period, the Fishery demonstrated economic and biological sustainability that warranted the development of more formal management control, which was implemented in December 2005 in the form of an interim management plan.

Reference to the gazettal and implementation of the Plan was made publicly available in the [2005/2006 State of the Fisheries Report](#) (Appendix 1). Implementing the Plan has served to strengthen management control and provided greater tenure and security for operators while maintaining a sustainable level of fishing effort. It is not expected to affect the criteria on which EPBC Act decisions are based.

- 2. The ESD Report, including all performance measures, responses and information requirements to be incorporated into the management regime and decision making process.**

In consultation with relevant stakeholders, the Department is progressing the development of formal policy guidelines for all WA commercial fisheries that will include ecological, economic and social objectives and performance indicators. In the interim, the Department reports against performance indicators for the Fishery in the *State of the Fisheries Report*.

- 3. DFWA to ensure, where appropriate, that any relevant indigenous, conservation, world heritage and recreational interests in the fishery are considered through consultative mechanisms.**

The Fishery moved from an experimental to an interim managed fishery following consultation with external stakeholders including the Regional Recreational Fishing Advisory

Committee and the Western Australian Fishing Industry Council. Feedback and comments received were taken into account when preparing the legislation. The Department received support throughout the external consultation process to progress the Fishery towards more formal management arrangements.

At this stage, neither industry nor the Department has proposed any changes to the Plan that require additional consultation. A full review of the Fishery and the Plan will be undertaken prior to the Plan's expiry on 21 August 2010. This review will include consultation with a broad range of stakeholders. The Department fully supports, and actively encourages, involving the broad range of stakeholders in its consultation processes.

4. By the end of 2006, DFWA to develop fishery specific performance measures for the target species (blue swimmer crab) and fishery specific objectives, performance indicators and measures, based on the best available information, for the two by-product species.

The performance measure for the Fishery requires that blue swimmer breeding stocks are maintained, as demonstrated by adult crab abundance, measured by catch per unit effort (CPUE). Blue swimmer CPUE has remained well above the historical minimum CPUE of approximately 1 kilogram per trap lift.

Catches of sand crab (*Charybdis cruciata*) and coral crab (*Ovalipes australiensis*) the two-byproduct species reported in the original assessment, have not eventuated into significant enough quantities to warrant the development of management objectives. On occasions when these species are captured, they are frequently returned to the sea alive as operators report they are too small and inconsistently captured to be marketed.

While numbers of both byproduct species have been recorded during quarterly catch monitoring surveys since 2003, the incidence of capture has been considered so low as to not warrant further action.

5. DFWA to incorporate into the management regime, an objective to minimise protected/listed species interactions, to minimise or maintain at sustainable levels the take of other non-retained species and to minimise impacts on the marine environment.

The Fisheries logbook used by all operators was modified in 2001 to include a section where any interactions with protected or listed species can be recorded. No interactions with protected or listed species have been reported by operators or observed by Departmental research officers since the last WTO assessment.

Operators in the Fishery are not permitted to retain species caught in their traps other than crabs of the Family Portunidae. The crab traps used are designed to minimise the capture of other marine creatures and there is no incentive to capture such species. Quarterly on-board sampling by Departmental officers has indicated low numbers of non-retained species, such as small finfish and starfish, which have been quickly returned to the water alive when captured. The incidence of capture of non-retained species has been considered so low as to not warrant further action.

Permitted gear types, specifications and trap setting configurations were legislated in the Plan in 2005 to minimise any potential impacts the traps may cause on the benthic marine environment or the potential to entangle marine species. The traps are relatively lightweight and set in a series of not less than 20 crab traps, in part to avoid the traps from dragging along the bottom. The negatively buoyant rope and strings of traps with only a float set at each end significantly reduces the amount of rope and floats in the water.

6. **By December 2006, DFWA to conduct a compliance risk assessment to determine the most effective use of resources and to specify the measures needed to ensure adequate compliance with the management regime. DFWA to develop a compliance strategy for the fishery, to address compliance issues identified as high risk, that includes clear management actions and the means of measuring the performance of the strategy on a defined and regular basis.**

A comprehensive compliance risk assessment, which included on-board field observations was undertaken in the Fishery between May and July 2007. The Department has developed a matrix of risks and mitigation strategies to address the potential compliance issues identified. It is not appropriate that the compliance strategies or risk matrix be made publicly available.

7. **DFWA, in its Annual State of the Fisheries Report, to report on the performance of the SBECF against performance measures that relate to the sustainability of the fishery, once developed.**

An annual review of the performance of the Fishery against the CPUE performance measure has been provided in the annual *State of The Fisheries Report*, which can be found at Appendix 1 or via the following links:

[2005/2006 State of the Fisheries Report](#)
[2004/2005 State of the Fisheries Report](#)
[2003/2004 State of the Fisheries Report](#)

8. **DFWA to develop a research strategy for the fishery that:**
 - **Identifies research information needs and priorities to meet the management information, stock assessment and performance measurement needs of the fishery; and**
 - **Investigates potential synergies with other blue swimmer crab research.**

A research strategy to identify research information needs and priorities to meet the management information, stock assessment and performance measurement needs of the Fishery, and potential synergies with other blue swimmer crab research, is presented in the final report on FRDC project no. 2001/068 by Bellchambers *et al.* (2005). (Appendix 2)

9. **Noting the pending development of the Interim Management Plan and the potential for fishing efficiency to increase and for the fishery to continue to evolve, DFWA to review the management arrangements of the fishery to ensure that blue swimmer crab stocks continue to be fished within ecologically sustainable levels.**

On-board research monitoring has continued in the Fishery on a quarterly basis since 1998. Information is collected on the size-frequency, distribution and abundance of blue swimmer crabs in Shark Bay as well as information noted on bycatch species. This information is used in conjunction with the daily fishing logbooks and monthly catch and effort returns provided by all fishers to ensure catch and effort levels remain sustainable. Data are analysed on an annual basis and to date, there are no indications from the scientific data or from industry that fishing is at an unsustainable level.

The blue swimmer stock will continue to be monitored quarterly for the life of the interim Plan (which expires in August 2010). Prior to the Fishery potentially moving to a managed fishery, a thorough review of the Plan, byproduct and bycatch species will be undertaken. However, at this stage scientific data indicate that a review of this scale is not warranted.

10. DFWA to implement an education program to ensure that industry has the capacity to make protected species reports at an appropriate level of accuracy.

The voluntary logbook used by all operators was modified in 2001 to include a section where operators can record any interactions with protected or listed species. Research technicians aboard quarterly sampling trips and management staff have helped educate skippers and/or permit holders of reporting any such interactions to DEW.

All licence holders have been issued the NHT published "Protected Marine Species Identification Guide" for reference when reporting any interactions with listed/protected species.

5. CONCLUSION

This report should provide sufficient information for DEW to re-assess the Fishery against the *Guidelines for the Ecologically Sustainable Management of Fisheries*, under Part 13 and 13A of the *EPBC Act 1999*. However, should you require any further information please contact Matt Stadler on (08) 9941 11854 or via email Matthew.Stadler@fish.wa.gov.au.

6. Appendix 1. Copies of the Fishery’s Annual Reports from the *State of the Fisheries Report* over the past three years.

[Website links to *State of the Fisheries Reports* provided above]

7. Appendix 2. FRDC Report 2001/068

[Report provided separately]