



**Australian Government**

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**Department of the Environment and Water Resources**

Assessment of the  
**WEST COAST DEEP SEA CRAB INTERIM  
MANAGED FISHERY**

**MARCH 2007**

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ISBN: 0 642 55263 0

#### **Disclaimer**

This document is an assessment carried out by the Department of the Environment and Water Resources 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 Water Resources 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 Water Resources or the Australian Government.

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**Table 1: Summary of the West Coast Deep Sea Crab Interim Managed Fishery (WCDSCIMF)**

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| <p><b>Publicly available information relevant to the fishery</b></p> | <ul style="list-style-type: none"> <li>• <i>Fish Resources Management Act 1994;</i></li> <li>• <i>Fish Resources Management Regulations 1995;</i></li> <li>• <i>West Coast Deep Sea Crab Fishery (Interim) Management Plan 2003;</i></li> <li>• <i>State of the Fisheries Report 2005/2006;</i></li> <li>• <i>Application to the Department of the Environment and Heritage on the West Coast Deep Sea Crab Interim Managed Fishery, January 2007;</i></li> <li>• <i>Application to Environment Australia on the West Coast Deep Sea Crab Interim Managed Fishery, July 2003;and</i></li> <li>• <i>Department of the Environment and Heritage's Assessment of the West Coast Deep Sea Crab Interim Managed Fishery, March 2004.</i></li> </ul> |
| <p><b>Area</b></p>                                                   | <p>The area of the WCDSCIMF lies in Commonwealth waters at depths of 150–1200 metres from the Northern Territory border to Cape Leeuwin. Currently, the fishery is divided into five fishing zones. Zones 2 and 3 have proven to be most productive.</p> <p>It is expected that the fishery will move to a new unitised quota-based management system in 2007 which will allow equal spatial access to all 7 permit holders.</p>                                                                                                                                                                                                                                                                                                               |
| <p><b>Fishery status</b></p>                                         | <p>The <i>State of the Fisheries Report 2005/06</i> notes that total catch decreased in 2005 but catch rates have continued to improve. The Report also notes that breeding stock levels are adequate due to the protection of the broodstock from the minimum size limits for the crabs.</p> <p>There are no resource concerns for these species.</p>                                                                                                                                                                                                                                                                                                                                                                                         |
| <p><b>Target Species</b></p>                                         | <p>Crystal (or snow) crab (<i>Chaceon spp.</i>)*<br/> Champagne crab (<i>Hypothalassia acerba</i>)<br/> Giant crab (<i>Pseudocarcinus gigas</i>)</p> <p>A description of the target species biology can be found in the WCDSCIMF 2003 submission and the 2004 Department of the Environment and Water Resources (DEW, formerly the Department of the Environment and Heritage) assessment report.</p>                                                                                                                                                                                                                                                                                                                                          |
| <p><b>Byproduct Species</b></p>                                      | <p>No byproduct is taken. Rock lobsters may not be retained.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>Gear</b></p>                                                   | <p>Standard plastic pots with size specifications (782 mm length x 565 mm width x 470 mm height) and a compulsory escape gap is used in the fishery. Each permit allows the use of 700 pots.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>Season</b></p>                                                 | <p>All year – no closed season.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>Commercial harvest 2005</b></p>                                | <p>207 tonnes (t) of crystal crabs was taken in 2005. This is a decrease of 11% of catch taken in 2004. From 2001 to 2005 crystal crab catch has remained relatively stable at around 190 to 225 t while catch rates continue to improve. It is believed that this is associated with efficiency increases and possible staged withdrawal of some catch restrictions that fishers have imposed on themselves, eg larger minimum size than legal minimum size, which has opened up a previously unfished portion of</p>                                                                                                                                                                                                                         |

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|                                         | <p>the stock.</p> <p>There were no catches of champagne or giant crabs during the 2005 season.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Value of commercial harvest 2005</b> | \$2.7 million.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Take by other sectors</b>            | <p>No recreational or indigenous take has been recorded.</p> <p>All three crab species is taken in the Western Australian (WA) South Coast Crustacean Fishery. Giant crab is also harvested in commercial fisheries in Tasmania, South Australia and Victoria. Deep sea crab species may be taken in the Commonwealth Western Deepwater Trawl Fishery although harvest is thought to be small.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Commercial licences issued</b>       | <p>7 permits with 5 full-time permits (Class F) which allows for access 12 months per year and 2 part-time permits (Class P) which allows for a maximum of 3 months per year.</p> <p>The <i>State of the Fisheries Report 2005/06</i> notes that all permits are not being utilised therefore indicating some latent effort in the fishery.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Management arrangements</b>          | <p>The fishery is managed under the <i>West Coast Deep Sea Crab Fishery (Interim) Management Plan 2003</i> (Management Plan), the <i>Western Australian Fish Resources Management Act 1994</i>, and <i>Fish Resources Management Regulations 1995</i> (FRMR).</p> <p><u>Input controls</u></p> <ul style="list-style-type: none"> <li>– limited entry</li> <li>– gear restrictions</li> <li>– zonal management</li> <li>– legal minimum sizes for champagne crabs (92 mm carapace length) and giant crabs (140 mm carapace length)</li> <li>– voluntary minimum size for crystal crabs (120 mm carapace width) [in 2007 FRMR will be amended to include a legal minimum size]</li> <li>– protection of egg-bearing female crabs</li> <li>– spatial and temporal restrictions</li> </ul> <p>Department of Fisheries Western Australia (DFWA) advise that the fishery will move to a new unitised quota-based interim Management Plan which is expected to be gazetted and implemented in 2007. The current interim Management Plan expires on 31 December 2007. The new interim Management Plan will give all unit holders equal access (quota, temporal and spatial) to the fishery.</p> |
| <b>Export</b>                           | Majority of product exported live to Asia.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Bycatch</b>                          | <p>Low – limited to small amounts of deep sea crabs, finfish and molluscs.</p> <p>Bycatch is recorded in logbooks on a monthly basis. A risk assessment for identified non-retained/bycatch has been completed and all species were given a negligible risk rating. The low overall incidence of bycatch is attributed to the small number of vessels, the use of mandatory escape gaps and the depths and manner in which pots are</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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|                                           | used.                                                                                                                                                                                                                                                                                                                 |
| <b>Interaction with Protected Species</b> | Potentially, several whale and dolphin species and leatherback turtle interactions but there have been no reported incidents. Logbooks include an area for reporting interactions with marine mammals, turtles and birds.                                                                                             |
| <b>Ecosystem Impacts</b>                  | There is little information on the impact of the fishery on the marine environment generally. However, the small number of vessels, the manner in which pots are set and hauled, the reportedly small amount of bycatch and sustainable take of target species mitigate against significant impacts on the ecosystem. |

*\* Crystal crab and snow crab are used interchangeably. Please note that while the 2004 assessment refers to snow crab, the 2007 submission refers to the species as crystal crab and as such DEW has used this in this assessment report. Additionally DFWA advise that crystal crab is now the official marketing name for this species.*

**Table 2: Progress in implementation of recommendations made in initial assessment of the WCDSMIF**

*\* Note that DFWA submission reports against draft recommendations and not the final agreed recommendations. Information provided in the 2007 submission is sufficient to determine progress against final recommendations.*

| Recommendation                                                                                                                                                                                                                                                                                                                                                        | Progress                                                                                                                                                                                                                                                       | Recommended Action                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <p>1. DFWA to immediately inform DEH of any action taken to address threats to the sustainability of the West Coast Deep Sea Crab Fishery.</p>                                                                                                                                                                                                                        | <p>Management arrangements for the fishery have not changed since the last assessment.</p> <p>DFWA report in the 2007 submission for the fishery that initial advice on the intention to develop a new interim Management Plan was given in 2004.</p>          | <p>DFWA is required to advise DEW of changes to the management arrangements for the fishery. (<b>Condition 2, Table 5</b>)</p>                                                                                                                                                                                                                                                                                                  |
| <p>2. DFWA to ensure that the Ecologically Sustainable Development (ESD) report, including all performance measures, responses and information requirements, is formally incorporated into the management regime and decision making process.</p>                                                                                                                     | <p>DFWA advise that the original intention to incorporate this requirement into policy guidelines known as Ministerial Policy Guidelines is no longer appropriate. As such DFWA are currently considering alternative options.</p>                             | <p>DEW recommends that DFWA review and develop performance measures and indicators where appropriate. DEW considers it a priority that a fishery has performance measures and is less concerned with the specific approach taken to formally incorporate these into a management regime. (<b>Recommendation 1, Table 4</b>)</p>                                                                                                 |
| <p>3. DFWA to ensure, where appropriate, that any relevant conservation interests in the fishery are considered throughout consultative mechanisms. In particular, in conducting the review of the fishery and in developing any new management arrangements for the fishery, DFWA to ensure that participation by conservation interests is specifically sought.</p> | <p>While the fishery does not have a formal consultative committee, DFWA inform the representative bodies of WA's conservation and recreational sectors of relevant issues. However engagement by these sectors is not strong due to competing priorities.</p> | <p>None. DFWA has demonstrated their commitment to inform relevant conservation and recreational interests about this fishery. DEW notes DFWA's intent to continue to notify these sectors of any significant issues for the fishery despite any formal engagement. DEW notes that this will be important in light of the development of the new interim Management Plan and significant management changes to the fishery.</p> |

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| <p>4. DFWA to conduct, within 12 months, 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. Within two years, DFWA to develop and implement a compliance strategy for the fishery that includes clear management actions and the means of measuring the performance of the strategy on a defined and regular basis.</p> | <p>In 2006 an assessment of the current management and legislative arrangements of the fishery and the propensity for illegal activity was undertaken. This included inspections of commercial landings of crabs in Carnarvon (the main fishing zone) and discussions with industry members.</p> <p>DFWA advise that the fishery presents a low compliance risk due to the low number of participants and the manner in which the crabs are captured, unloaded and transported to processors. A formal risk assessment process for the fishery is planned for 2007.</p> | <p>DEW recommends DFWA conduct a formal compliance risk assessment and develop a compliance strategy to address any high risks identified as part of the assessment. (<b>Recommendation 2, Table 4</b>)</p>                                                                                                                                                                                         |
| <p>5. As part of the review of the fishery, DFWA to review catch and effort reporting requirements, and amend these requirements as necessary, to ensure that the completeness and reliability of fishery dependent information is maximised. DFWA to also ensure that catch and effort data collected is validated on an ongoing basis.</p>                                                                                                    | <p>A review of the fishery was undertaken in 2004 to determine if the fishery should continue and under what management arrangements.</p> <p>DFWA report that catch and effort reporting requirements have been reviewed on multiple occasions over the last 3 years. Compulsory logbook sampling forms have been amended to obtain more accurate data on fishing depths and positions. Processor returns are used as an additional validation process.</p>                                                                                                             | <p>None. As DFWA has demonstrated a progressive review of data information requirements and validation, DEW is generally satisfied that the information collection system are sufficient for the fishery at this stage in time. DEW notes that as the move to quota management is implemented, validation of catch will be important to ensure the Total Allowable Catch (TAC) is not exceeded.</p> |
| <p>6. As part of the review of the fishery, DFWA to review the research information needs and priorities to meet the management information, decision making and</p>                                                                                                                                                                                                                                                                            | <p>DFWA advise that research information needs have been reviewed on multiple occasions in the last 3 years. While information on recruitment, fishing mortality, habitat and ecosystem impacts</p>                                                                                                                                                                                                                                                                                                                                                                     | <p>DEW notes that the FRDC project 2001/055 is likely to provide valuable biological information on champagne and crystal crabs which will assist in the management of the fishery and recommends DFWA use this and any other relevant research to inform the management of</p>                                                                                                                     |

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| <p>performance measurement needs of the fishery. DFWA to develop a research strategy to address identified priority areas, which includes clear and achievable timeframes for implementation within the context of available research funds.</p>                                                                                                                                                                                                                                                          | <p>were identified as being useful, the size and value of the fishery limits the ability for this research to be undertaken in the short to medium term.</p> <p>DFWA report that an existing sampling program should be retained and research output from Fisheries Research and Development Corporation (FRDC) project 2001/055 (yet to be published) will be prepared for peer reviewed journals.</p>                                                                                                                                                                               | <p>the fishery. A research strategy should also be developed appropriate to the scale of the fishery. <b>(Recommendation 3, Table 4)</b></p>                                                                                                                                                    |
| <p>7. DFWA to determine estimates of the potential productivity and sustainable yield of the snow crab resources and develop robust and biologically meaningful performance measures and reference points, linked to defined management actions for the snow crab resource within three years. As an interim measure, by June 2004, DFWA to incorporate catch rates (i.e. Catch-Per-Unit-Effort) into the monitoring, assessment and performance measures for the snow crab component of the fishery.</p> | <p>DFWA report that CPUE is currently used as a proxy for crab abundance.</p> <p>The submission and the <i>State of the Fisheries Report 2005/06</i> indicate that catch continues to be the key performance measure for the fishery with reference ranges 0-2 t for giant crabs; below 50 t for champagne crabs and between 100 – 300 t for crystal crabs.</p> <p>DFWA has indicated in the 2007 submission that now that a longer time series of catch and effort data has been reported, it will be reasonable to examine stock status using a biomass dynamic model approach.</p> | <p>DEW recommends DFWA to develop a means for estimating the potential productivity and sustainable yield of target crab stocks <b>(Recommendation 4, Table 4)</b>.</p> <p>The review and development of performance measures and indicators has been covered in Recommendation 1, Table 4.</p> |
| <p>8. DFWA to ensure that management arrangements to control the take of joint deep sea crab stocks in the West Coast Deep Sea Crab Fishery and South</p>                                                                                                                                                                                                                                                                                                                                                 | <p>DFWA advise in the 2007 submission that management arrangements for the fishery have and will continue to take into consideration the total take of deep sea crabs from the South Coast Crustacean</p>                                                                                                                                                                                                                                                                                                                                                                             | <p>DEW considers that removals from other sectors and jurisdictions should be considered during the analysis of estimating potential productivity and sustainable yield of target crab stocks. As such this recommendation has been incorporated within</p>                                     |

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| <p>Coast Crustacean Fishery are consistent and stock assessments ensure that all removals from both fisheries are taken into account. In addition, DFWA to ensure that removals of deep sea crabs by trawling operations are considered in stock assessment and management.</p>              | <p>Fishery (SCCF) and Western Deepwater Trawl Fishery. The submission states that insignificant numbers of crystal crabs are made by the Western Deepwater Trawl Fishery and consideration is being given to limit the daily take of champagne crabs by the Western Rock Lobster Fishery.</p>                                                                                                                                                                                                                                                                                                                                                                                  | <p>Recommendation 4, Table 4.</p>                                                                                                                                                                                                                                                                                |
| <p>9. As part of the review of the fishery, DFWA to review effort levels in the fishery and develop a strategy to ensure that fishery effort is maintained at precautionary levels appropriate to the size of the deep sea crab resources and the species' vulnerability to overfishing.</p> | <p>Effort levels have been reviewed on several occasions. An initial increase in effort in the fishery led to a discussion with fishers and stakeholders which identified the need to prevent any further increase. As a result of these discussions, DFWA has decided to move to a TAC quota management system. A TAC of 140 t has been recommended which is below the tonnage taken by this fishery over the last few years (~ 200 t).</p> <p>DFWA has advised that one of the reasons for the move to an equal access fishery which includes the removal of the zones is the permit holders desire to have more equitable access to historically more productive zones.</p> | <p>DEW recommends that DFWA continue to monitor and review fishery catch and effort data and in particular analyse fisher behaviour once the move to an equal access fishery occurs in order to assess the fishery's vulnerability to localised depletion. This has been incorporated into Recommendation 4.</p> |
| <p>10. DFWA to continue to pursue identification of all non-commercial bycatch species and seek advice from the WA Museum on the biological risks of these species. Findings are to be incorporated into future risk</p>                                                                     | <p>DFWA has pursued identification of non-commercial bycatch species including sending photographs of bycatch to the WA Museum for identification. However to date the Museum has supplied species names for only a few specimens.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>None. DEW acknowledges DFWA efforts to identify bycatch species. This recommendation was made in light of DFWA seeking advice from the WA Museum at the time of the first assessment. DEW suggests that should any new species be identified, DFWA consider the species in any future risk assessment.</p>    |

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| assessments and management responses.                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                     |
| 11. As part of the review of the fishery, DFWA to assess the adequacy of monitoring and assessment arrangements for detecting change and trends in bycatch composition and quantity and species interactions. | <p>DFWA advise that bycatch provisions are included on the logbooks which are recorded daily and submitted monthly. Due to the difficulties in identifying bycatch species, reporting is limited to broad taxonomic categories.</p> <p>Additionally DFWA report that it has not been possible to review bycatch for this fishery in a scientifically rigorous way.</p> | None. DEW recognises that bycatch reporting is a requirement of the fishery. DEW expects DFWA to continue to monitor bycatch and should any deviation occur, respond appropriately. |

*\* Note that DFWA submission reports against a recommendation (3) in relation to compliance with international or regional regimes which was not a final agreed recommendation. Therefore this recommendation and response is not included in the above table.*

**Table 3: DEW assessment of the WCDSCIMF against the requirements of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) related to decisions made under Parts 13 and 13A.**

**Part 13**

| <b>Section 208A Minister may accredit plans or regimes</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>DEW assessment of the WCDSCIMF</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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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 <b>satisfied</b> 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>(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>The WCDSCIMF is managed under the <i>West Coast Deep Sea Crab Fishery (Interim) Management Plan 2003</i>, the <i>Fish Resources Management Act 1994</i>, and the <i>Fish Resources Management Regulations 1995</i>.</p> <p>The Interim Management Plan for the WCDSCIMF was accredited in March 2004. The management arrangements for the WCDSCIMF have not significantly changed since this accreditation was granted. Consequently, a new Part 13 declaration is not needed at this time.</p> <p>Currently, evidence suggests that the WCDSCIMF has minimal interactions with listed threatened species and no interactions have been reported. Therefore, DEW considers the current operation of the WCDSCIMF is not likely to adversely affect the survival or recovery in nature of any threatened species.</p> |

| <b>Section 222A Minister may accredit plans or regimes</b>                                                                                                                                                                                                            | <b>DEW assessment of the WCDSCIMF</b>                                                                                                                                                                                      |
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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 <b>satisfied</b> that:</p> | <p>The WCDSCIMF is managed under the <i>West Coast Deep Sea Crab Fishery (Interim) Management Plan 2003</i>, the <i>Fish Resources Management Act 1994</i>, and the <i>Fish Resources Management Regulations 1995</i>.</p> |

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| <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>(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 Interim Management Plan for the WCDSCIMF was accredited in March 2004. The management arrangements for the WCDSCIMF have not significantly changed since this accreditation was granted. Consequently, a new Part 13 declaration is not needed at this time.</p> <p>Currently, evidence suggests that the WCDSCIMF has minimal interactions with listed migratory species. The ESD risk assessment completed for this fishery identified migratory whales as a potential species for interactions with the fishery however it was assessed as a negligible risk to whales. Therefore, DEW considers the current operation of the WCDSCIMF is not likely to adversely affect the survival or recovery in nature of any listed migratory species.</p> |
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| <b>Section 245 Minister may accredit plans or regimes</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>DEW assessment of the WCDSCIMF</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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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 <b>satisfied</b> 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>(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>The WCDSCIMF is managed under the <i>West Coast Deep Sea Crab Fishery (Interim) Management Plan 2003</i>, the <i>Fish Resources Management Act 1994</i>, and the <i>Fish Resources Management Regulations 1995</i>.</p> <p>The Interim Management Plan for the WCDSCIMF was accredited in March 2004. The management arrangements for the WCDSCIMF have not significantly changed since this accreditation was granted. Consequently, a new Part 13 declaration is not needed at this time.</p> <p>The original submission for this fishery included an ESD risk assessment that noted that there have been no reported interactions of this fishery with whales and dolphins. The fishery was assessed as having a negligible risk to these species. The updated report indicates that there are still no reported interactions. Therefore, DEW considers the current operation of the WCDSCIMF is not likely to adversely</p> |

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|  | affect the conservation status of a species of cetacean or a population of that species. |
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| <b>Section 265 Minister may accredit plans or regimes</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>DEW assessment of the WCDSCIMF</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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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 <b>satisfied</b> 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;</p> <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>The WCDSCIMF is managed under the <i>West Coast Deep Sea Crab Fishery (Interim) Management Plan 2003</i>, the <i>Fish Resources Management Act 1994</i>, and the <i>Fish Resources Management Regulations 1995</i>.</p> <p>The Interim Management Plan for the WCDSCIMF was accredited in March 2004. The management arrangements for the WCDSCIMF have not significantly changed since this accreditation was granted. Consequently, a new Part 13 declaration is not needed at this time.</p> <p>Currently, evidence suggests that the WCDSCIMF only has minimal interactions with listed marine species. Therefore, DEW considers the current operation of the WCDSCIMF is not likely to adversely affect the conservation status of a listed marine species or a population of that species.</p> |

### **Part 13A**

| <b>Section 303DC Minister may amend list</b>                                                                                                                                                                                                                                                                                   | <b>DEW assessment of the WCDSCIMF</b>                                                    |
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| <p>Minister may, by instrument 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) 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 WCDSCIMF has been carried out under Part 10 of the EPBC Act.</p> |

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| <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 may be taken into account in amending the List of Exempt Native Specimens (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 objects is likely to be a relevant factor.</p> <p>DEW considers that the amendment of the list of exempt native specimens to include product taken in the WCDSCIMF Wildlife Trade Operation (WTO) would be consistent with the provisions of Part 13A as:</p> <ul style="list-style-type: none"> <li>▪ the fishery will not harvest any Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) listed species;</li> <li>▪ there are management arrangements in place to ensure that the resource is being managed in an ecologically sustainable way (see Table 1);</li> <li>▪ the operation of the WCDSCIMF is unlikely to be unsustainable and threaten biodiversity within the next 3 years; and</li> <li>▪ the EPBC Regulations 2000 do not specify fish as a class of animal in relation to the welfare of live specimens.</li> </ul> |
| <p>(3) Before amending the list referred to in section 303DB (list of exempt native specimens), the Minister:</p> <ul style="list-style-type: none"> <li>(a) must consult such other Minister or Ministers as the Minister considers appropriate; and</li> <li>(b) must consult such other Minister or Ministers of each State and self-governing Territory as the Minister considers appropriate; and</li> <li>(c) may consult such other persons and organisations as the Minister considers appropriate.</li> </ul> | <p>DEW considers that the consultation requirements have been met. Public comment was sought on the DFWA submission for the WCDSCIMF and provided sufficient opportunity for consultation with other persons and organisations.</p> <p>The letter to the Hon Jon Ford JP MLC, WA Fisheries Minister advises him of the intention to declare the fishery a WTO which will allow product from this fishery to be exported for 3 years.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| Section 303FN Approved wildlife trade operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | DEW assessment of the WCDSCIMF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <p>The Minister may, by instrument published in the <i>Gazette</i>, declare that a specified wildlife trade operation is an <b><i>approved wildlife trade operation</i></b> for the purposes of this section.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <p>The Minister must not declare an operation as an approved wildlife trade operation unless the Minister is <b>satisfied</b> that:</p> <ul style="list-style-type: none"> <li>(a) the operation is consistent with the objects of Part 13A of the Act; and</li> <br/> <li>(b) the operation will not be detrimental to: <ul style="list-style-type: none"> <li>i. the survival of a taxon to which the operation relates; or</li> <li>ii. the conservation status of a taxon to which the operation relates; and</li> </ul> </li> <br/> <li>(ba) the operation will not be likely to threaten any relevant ecosystem including (but not limited to) any habitat or biodiversity; and</li> </ul> | <p>The WCDSCIMF is consistent with objects of Part 13A (listed after this table) as:</p> <ul style="list-style-type: none"> <li>▪ the fishery will not harvest any CITES listed species;</li> <li>▪ there are management arrangements in place to ensure that the resource is being managed in an ecologically sustainable way (see Table 1);</li> <li>▪ the operation of the WCDSCIMF is unlikely to be unsustainable and threaten biodiversity within the next 3 years; and</li> <li>▪ the EPBC Regulations 2000 do not specify fish as a class of animal in relation to the welfare of live specimens.</li> </ul> <p>DEW considers that the WCDSCIMF will not be detrimental to the survival or conservation status of a taxon to which it relates within the next 3 years, given the management measures currently in place, which include:</p> <ul style="list-style-type: none"> <li>– limited entry;</li> <li>– gear restrictions;</li> <li>– zonal management;</li> <li>– legal and voluntary minimum crab sizes;</li> <li>– protection of egg-bearing female crabs; and</li> <li>– spatial restrictions.</li> </ul> <p>DEW considers that the WCDSCIMF will not threaten any relevant ecosystem within the next 3 years, given the management measures currently in place.</p> |

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| <p>(c) if the operation relates to the taking of live specimens that belong to a taxon specified in the regulations – the conditions that, under the regulations, are applicable to the welfare of the specimens are likely to be complied with; and</p> <p>(d) such other conditions (if any) as are specified in the regulations have been, or are likely to be, satisfied.</p>                                          | <p>The EPBC Regulations 2000 do not specify fish as a class of animal in relation to the welfare of live specimens.</p> <p>No other conditions are specified in relation to commercial fisheries in the EPBC Regulations 2000.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p>In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have <b>regard</b> to:</p> <p>(a) the significance of the impact of the operation on an ecosystem (for example, an impact on habitat or biodiversity); and</p> <p>(b) the effectiveness of the management arrangements for the operation (including monitoring procedures).</p>                                   | <p>DEW considers that the WCDSCIMF will not have a significant impact on any relevant ecosystem within the next 3 years, given the small number of vessels, the manner in which pots are set and hauled, the reportedly small amount of bycatch and sustainable take of target species.</p> <p>The management arrangements that will be employed for the WCDSCIMF are likely to be effective. The fishery is managed by various input controls including limited entry and effort, zonal management and spatial restrictions. The fishery management controls are underpinned by monitoring procedures including compulsory catch and effort data and logbook information. Processor returns have also been used as an additional data source to assist in validation of catch. Commercial landing inspections have also been conducted.</p> |
| <p>In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have <b>regard</b> to:</p> <p>(a) whether legislation relating to the protection, conservation or management of the specimens to which the operation relates is in force in the State or Territory concerned; and</p> <p>(b) whether the legislation applies throughout the State or Territory concerned; and</p> | <p>The WCDSCIMF is managed under the <i>West Coast Deep Sea Crab Fishery (Interim) Management Plan 2003</i>, the <i>Fish Resources Management Act 1994</i>, and the <i>Fish Resources Management Regulations 1995</i>.</p> <p>The Western Australian <i>Fish Resources Management Act 1994</i> applies throughout Western Australian waters. The fishery which operates mainly in Commonwealth waters is managed by WA under an</p>                                                                                                                                                                                                                                                                                                                                                                                                          |

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| <p>(c) whether, in the opinion of the Minister, the legislation is effective.</p>                                                                                                                                                                                                                   | <p>Offshore Constitutional Settlement agreement between the Australian and WA governments.</p> <p>The current legislation for the WCDSCIMF appears to be effective.</p> |
| <p>For the purposes of section 303FN, an operation is a wildlife trade operation if, and only if, the operation is an operation for the taking of specimens and:</p> <p>(d) the operation is a commercial fishery.</p>                                                                              | <p>The WCDSCIMF is a commercial fishery.</p>                                                                                                                            |
| <p>In deciding whether to declare that a commercial fishery is an approved wildlife trade operation for the purposes of this section, 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 WCDSCIMF 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 declare that a fishery is an approved wildlife trade operation for the purposes of this section.</p>                                                                                                  |                                                                                                                                                                         |

| <b>Section 303FR Public consultation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>DEW assessment of the WCDSCIMF</b>                                                                                                                                                                                                                                                                                                                                                                                                          |
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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> <p>(a) setting out the proposal to make the declaration; and</p> <p>(b) setting out sufficient information to enable persons and organisations to consider adequately the merits of the proposal; and</p> <p>(c) inviting persons and organisations to give the Minister, within the period specified in the notice, written comments about the proposal.</p> | <p>DEW considers that consultation requirements of the EPBC Act for declaring a WTO have been met. A public notice, which set out the proposal to declare the WCDSCIMF a WTO and included the submission titled – <i>Application to the Department of the Environment and Heritage on the West Coast Deep Crab Interim Managed Fishery</i>, was released for public comment which closed on 23 February 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 declare the WCDSCIMF a WTO and included the submission was released for public comment on 25 January 2007 and closed on 23 February 2007, a total of 21 business days.</p>                                                                                                                                                                                                                   |

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| 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. | No public comments about the proposal were received. |
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| <b>Section 391 Minister must consider precautionary principle in making decisions</b>                                                                                                                                                            | <b>DEW assessment of the WCDSMIF</b>                                                                                                                                                |
| 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.                               | The Minister for the Environment and Water Resources or Delegate of the Minister must consider the precautionary principle when making a decision to include specimens on the LENS. |
| 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. |                                                                                                                                                                                     |

### 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 DFWA for the WCDSCIMF**

The material submitted by the Department of Fisheries, Western Australia (DFWA) demonstrates that the management arrangements for the West Coast Deep Sea Crab Interim Managed Fishery (WCDSCIMF) meet most of the requirements of the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries*. The Department of the Environment and Water Resources (DEW) recognises that the limited entry, gear restrictions, minimum legal and voluntary size limits, prohibition on take of egg-bearing female crabs and spatial restrictions are in place to promote the ecologically sustainable harvesting of species from this fishery. As such, DEW considers that overall the management regime aims to ensure that fishing is conducted in a manner that does not lead to over-fishing and for fishing operations to be managed to minimise their impact on the structure, productivity, function and biological diversity of the ecosystem.

While the fishery is relatively well managed, DEW has identified a number of risks and uncertainties that must be managed to ensure that impacts are minimised:

- the lack of biological information on deep sea crab species especially crystal crab;
- the absence of a robust system for estimating the potential productivity and sustainable yield of crystal crab; and
- the impending development and implementation of a new interim Management Plan for the fishery which will significantly change the way the fishery is currently managed.

DEW 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. The key challenges for this fishery will be the development and implementation of significant management changes under a new interim Management Plan, and identifying and utilising critical elements of deep sea crab biology, particularly crystal crab, to inform management arrangements. DEW considers that, until it can be demonstrated that these issues have been adequately dealt with, a 3-year Wildlife Trade Operation declaration is appropriate.

DEW 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. DEW 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. For these reasons, the Management Plan was accredited under Part 13 of the EPBC Act in March 2004. Since there have been no changes to the management arrangements since the initial assessment of the fishery, DEW considers that the existing Part 13 accreditation remains valid. However, once the new interim Management Plan is developed a new Part 13 accreditation will be needed to ensure operators are protected from the offence provisions under Part 13 of the EPBC Act.

Unless a specific time frame is provided in the recommendation each recommendation must be addressed within the life of the declaration (3 years). Note that a standard condition of a WTO is an annual reporting requirement, the details of which are provided at the end of the recommendations.

**Table 4: WCDSCIMF Assessment– Summary of Issues and Recommendations March 2007**

|   | <b>Issue</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>Recommendation</b>                                                                                                                                                                                                                                                                                                                        |
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| 1 | <p><u>Performance measures, indicators and response timeframe</u></p> <p>Catch continues to be the only performance measure with a prescribed reference range for this fishery. Catch rate is reported in the 2007 submission and <i>State of the Fisheries Report 2005/06</i>, however this performance measure does not have a defined reference range.</p> <p>Additionally in the first assessment of this fishery, a recommendation was made for the performance measures, responses and information requirements to be formally incorporated into the management regime. DFWA has advised that their original intention to include these in policy guidelines is no longer appropriate and is considering alternate options. DEW’s priority is for performance measures to be developed for a fishery rather than the specific approach taken to achieve this condition. DEW therefore recommends DFWA review the current performance measures and indicators for the fishery and where appropriate, develop additional performance measures and indicators to meet the objectives of the fishery. These should be linked to defined management actions to ensure ongoing sustainable management of the resources.</p> <p>While the original submission for this fishery highlights management strategies that DFWA may employ before the next year if the performance limit is exceeded, DEW considers that a clear timeframe for a management response is important for determining an appropriate and timely response to deviation.</p> | <p>DFWA to review, and develop where appropriate, performance measures and indicators for the fishery and use these to inform management arrangements. Within three months of becoming aware of a performance indicator being triggered, DFWA to develop a clear timetable for the implementation of an appropriate management response.</p> |
| 2 | <p><u>Compliance</u></p> <p>DFWA advise that a formal risk assessment process for the WCDSCIMF is planned for early 2007. DEW notes that while the fishery may be considered a low compliance risk currently, the potential increased risk associated with the move towards a quota-based management system and the outcomes of the planned formal risk assessment will need to be addressed within an ongoing compliance strategy.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>DFWA to conduct a compliance risk assessment for the WCDSCIMF by the end of 2007 and develop a compliance strategy within 6 months of completion of the risk assessment to address any high risks identified.</p>                                                                                                                         |

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| 3 | <p><u>Research and strategies</u></p> <p>A FRDC project (2001/055) has been undertaken to evaluate the appropriateness of the current size limits for crystal and champagne crab and provide biological information on crystal crabs including distribution, sex ratio and relative abundance by depth. The project, while finished, has not been publicly released. As biological information on deep sea crabs is lacking generally, DEW considers that the information provided in the report and any other relevant research as it becomes available will be important for the management of the fishery and has the potential to provide guidance to the management regime.</p> <p>DEW acknowledges that the small scale of the fishery may limit the capability of this fishery to undertake extensive research, but encourages DFWA to develop a research strategy for the medium to long term. This is particularly important for crystal crab which is only commercially targeted in Western Australia.</p>                                                                                                                                          | <p>DFWA to use the results of any relevant research or information to inform the management of the fishery and to make changes to management arrangements where required. DFWA to develop a research strategy appropriate to the scale of the fishery which includes identified information gaps and priorities.</p> |
| 4 | <p><u>Sustainable yield and stock assessment</u></p> <p>DEW continues to consider that the estimation of the potential productivity and sustainable yield for crystal crab should be a priority for this fishery. DFWA has indicated in the 2007 submission for this fishery that it is reasonable to examine stock status using a biomass dynamic model now that a longer time series of catch and effort data has been reported. DEW encourages this approach.</p> <p>DEW also notes that as a move to quota management is impending and fishers will have equal spatial access, DFWA will need to monitor and analyse fisher behaviour such as catch and effort distribution to detect the fishery's vulnerability to localised depletion.</p> <p>DEW also considers it important that DFWA continue to monitor and take account of all removals, especially in relation to the South Coast Crustacean Fishery which takes the same 3 crab species; the Western Rock Lobster Fishery which is likely to be given a daily take limit of champagne crab; and Western Deep Water Trawl Fishery which occasionally catches small amounts of crystal crabs.</p> | <p>DFWA to develop a means of estimating the potential productivity and sustainable yield of target crab stocks. Such analysis should take into account life history traits of the target species, fisher behaviour and removals by other fisheries.</p>                                                             |

**Table 5: Conditions of the approved Wildlife Trade Operation**

| Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Reason                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <p>1. Operation of the fishery will be carried out in accordance with the <i>West Coast Deep Sea Crab Fishery (Interim) Management Plan 2003</i> and management regime for the fishery in force under the <i>Western Australian Fish Resources Management Act 1994</i> and <i>Fish Resources Management Regulations 1995</i>.</p>                                                                                                                                                                                                                                                                                                                    | <p>Export decisions relate to the arrangements in force at the time of the decision.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p>2. Department of Fisheries, Western Australia, to advise the Department of the Environment and Water Resources of any material change to the West Coast Deep Sea Crab Interim Managed Fishery's legislated interim Management Plan and/or arrangements that could affect the criteria on which the <i>Environment Protection and Biodiversity Conservation Act 1999</i> decisions are based, within three months of that change being made.</p>                                                                                                                                                                                                   | <p>In order to ensure that these decisions remain valid, DEW 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. Noting that DFWA are intending to develop and implement a new interim Management Plan in 2007 which will include significant changes to the management of the fishery, DFWA will need to advise DEW when these changes occur.</p> |
| <p>3. Reports to be produced and presented to the Australian Government Department of the Environment and Water Resources annually, and to include:</p> <ul style="list-style-type: none"> <li>a. A description of the status of the fishery and catch and effort information;</li> <li>b. The performance of the fishery against stated goals, objectives, strategies and reference points;</li> <li>c. Research undertaken or completed relevant to the fishery; and</li> <li>d. An outline of progress in implementing the recommendations made in the <i>Assessment of the West Coast Deep Sea Crab Interim Managed Fishery 2007</i>.</li> </ul> | <p>Reports are required to be submitted annually to ensure public transparency of management arrangements, to provide regular updates on the status of the fishery and report on progress in implementing recommendations.</p>                                                                                                                                                                                                                                                                                                                       |

## References

Department of Fisheries, Western Australia (2007) *Application to the Department of the Environment and Heritage on the West Coast Deep Sea Crab Interim Managed Fishery*, 26 pp, Perth, Australia.

Department of Fisheries, Western Australia (2006) *State of the Fisheries Report 2005/06*, 284 pp, Perth, Australia.

Department of Fisheries, Western Australia (2003) *Application to the Department of the Environment and Heritage on the West Coast Deep Sea Crab Interim Managed Fishery*, 81 pp, Perth, Australia.

Department of the Environment and Heritage (2004) *Assessment of the West Coast Deep Sea Crab Interim Managed Fishery*, 29 pp, Canberra, Australia.

## Acronyms

|          |                                                                      |
|----------|----------------------------------------------------------------------|
| DEW      | Department of the Environment and Water Resources                    |
| DFWA     | Department of Fisheries, Western Australia                           |
| EPBC Act | <i>Environment Protection and Biodiversity Conservation Act 1999</i> |
| ESD      | Ecologically Sustainable Development                                 |
| FRDC     | Fisheries Research and Development Corporation                       |
| FRMR     | <i>Fish Resources Management Regulations 1995</i>                    |
| LENS     | List of Exempt Native Specimens                                      |
| SCCF     | South Coast Crustacean Fishery                                       |
| TAC      | Total Allowable Catch                                                |
| t        | tonne                                                                |
| WA       | Western Australian                                                   |
| WCDSCIMF | West Coast Deep Sea Crab Interim Managed Fishery                     |
| WTO      | Wildlife Trade Operation                                             |