



**Australian Government**

---

**Department of the Environment and Water Resources**

Assessment of the  
**Victorian Giant Crab Fishery**

March 2007

© Commonwealth of Australia 2007

This work is copyright. Apart from any use as permitted under the Copyright Act 1968, no part may be reproduced by any process without prior written permission from the Commonwealth, available from the Department of the Environment and Water Resources. Requests and inquiries concerning reproduction and rights should be addressed to:

Assistant Secretary  
Marine Environment Branch  
Department of the Environment and Water Resources  
GPO Box 787  
Canberra ACT 2601

ISBN: 0 642 55262 2

#### **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.

While reasonable efforts have been made to ensure that the contents of this report are factually correct, the Australian Government does not accept responsibility for the accuracy or completeness of the contents, and shall not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on, the contents of this report. You should not rely solely on the information presented in the report when making a commercial or other decision.

**Table 1: Summary of the Victorian Giant Crab Fishery (VGCF)**

<b>Publicly available information relevant to the fishery</b>	<ul style="list-style-type: none"> <li>• Victorian <i>Fisheries Act 1995</i>;</li> <li>• Victorian <i>Fisheries Regulations 1998</i>;</li> <li>• The <i>Giant Crab Fishery Management Plan 2003</i>;</li> <li>• Commercial Fish Production Information Bulletin 2005;</li> <li>• Fisheries Victoria's submission <i>Reassessment of the Victorian Giant Crab Fishery</i>;</li> <li>• Department of the Environment and Heritage <i>VGCF Assessment Report, 2004</i>.</li> </ul>
<b>Area</b>	<p>The VGCF occurs in the Western Rock Lobster Fishery zone, which operates between Apollo Bay and the South Australian border.</p> <p>While giant crabs occur in the eastern rock lobster zone, there is insufficient data to determine whether the eastern zone could support commercial fishing of giant crabs. Two developmental permits have been issued to fishers to investigate the feasibility of a giant crab fishery in the eastern zone however there has been no fishing to date.</p> <p>The fishery operates in Commonwealth and State waters on the continental shelf and slope off Victoria.</p>
<b>Fishery status</b>	<p>Western Zone: believed to be fully fished, but stocks appear to be rebuilding.</p> <p>Eastern Zone: uncertain but believed to be under fished.</p>
<b>Target Species</b>	Giant crabs, <i>Pseudocarcinus gigas</i> .
<b>Byproduct Species</b>	Southern rock lobster ( <i>Jasus edwardsii</i> ), octopus ( <i>Octopus maorum</i> ) and small quantities of rock cod, leatherjackets, eels and morwong. Restrictions apply to some species.
<b>Gear</b>	<p>Baited pots.</p> <p>A pot can only have one entrance and one chamber and must have at least one escape gap designed to allow rock lobster and undersized giant crabs to escape. There is no maximum dimension for pots.</p>
<b>Season</b>	Closed seasons: 1 June – 15 November for female giant crabs and 1 September – 15 November for male giant crabs.
<b>Commercial harvest 2005/06</b>	21.2 tonnes.
<b>Value of commercial harvest 2005/06</b>	Approximately AU\$600,000.
<b>Take by other sectors</b>	<p>It is thought that no recreational fishing for giant crabs occurs in Victoria due to the offshore distribution and great depths at which the crabs occur. In addition, recreational fishers are not permitted to use pots in Victoria. There is also no known Indigenous fishery for giant crabs.</p> <p>Giant crabs may be taken during rock lobster fishing operations, however a rock lobster operator must also hold giant crab quota to be able to retain the product.</p> <p>There is a trip limit of five giant crabs for operators in the South East Trawl Fishery.</p>

<b>Commercial licences issued</b>	37 Giant Crab Fishery Access Licences in 2005/06, down from 42 licences in the previous year.  Giant crab licences must be held in conjunction with a Western Zone Rock Lobster Fishery Access Licence (of which there are 85).
<b>Management arrangements</b>	The fishery is managed under the <i>Giant Crab Fishery Management Plan 2003</i> , in accordance with the provisions of the <i>Fisheries Act 1995</i> .  The fishery is managed through input and output controls including: <ul style="list-style-type: none"> <li>• limited entry (maximum of 42 licences);</li> <li>• zonal management;</li> <li>• Individual Transferable Quota (ITQ) system with a total allowable catch (TAC) of 25 tonnes for the Western Zone;</li> <li>• minimum carapace length of 150 mm for both males and females;</li> <li>• closed seasons: <ul style="list-style-type: none"> <li>○ 1 June – 15 November for females</li> <li>○ 1 September – 15 November for males;</li> </ul> </li> <li>• gear restrictions; and</li> <li>• the protection of berried females.</li> </ul>
<b>Export</b>	Majority of product exported live to Asia.
<b>Bycatch</b>	Low – mainly hermit crabs, as well as draughtboard sharks, various scalefish and crustaceans. Undersized, berried or damaged giant crabs also constitute bycatch.
<b>Interaction with Protected Species<sup>1</sup></b>	Actual interactions are considered minimal, however high occurrences of sea birds (petrels, albatrosses and gannets), dolphins and seals have been observed in the vicinity of giant crab fishing operations. Southern Right Whales have also been seen near fishing operations.  A Code of Practice for minimising wildlife entanglements, particularly whales, in giant crab gear was introduced in 2004/05. The Code mainly relates to the way in which fishing gear is set, notably the length of pot lines. Most giant crab fishers have adopted the Code to date.  Mandatory reporting for all interactions with protected species will be introduced in April 2007.

<sup>1</sup> 'Protected species' means all species listed under Part 13 of the EPBC Act, including whales and other cetaceans and threatened, marine and migratory species.

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

Recommendation	Progress	Recommended Action
<p>1. The Victorian Department of Primary Industries (DPI) to inform the Department of the Environment and Water Resources (DEW, formerly the Department of the Environment and Heritage) of any future amendment to the management plan, related management documents or managerial commitments made in the submission.</p>	<p>There have been no changes to the <i>Giant Crab Fishery Management Plan 2003</i> or related documents.</p>	<p>DPI to inform DEW of any future amendment to the management plan, related management documents or managerial commitments made in the 2007 submission. This will be particularly important in 2007/08, when the review of the management plan commences.</p>
<p>2. DPI to ensure that the Compliance Strategy currently being developed includes clear management actions and the means of measuring the performance of the strategy on a defined and regular basis. DPI to also ensure that the following issues are specifically addressed in the development of the Compliance Strategy for the fishery:</p> <ul style="list-style-type: none"> <li>• Compliance with pot number restrictions and the total allowable catch;</li> <li>• Compliance with prescribed size limits for giant crab;</li> <li>• Potential for and management of illegal catch; and</li> <li>• Catch and effort data reliability (target species, bycatch and byproduct data).</li> </ul>	<p>The boats, operators and gear are common to both the giant crab and rock lobster fishery, therefore a single Rock Lobster and Giant Crab Compliance Strategy has been developed. The strategy contains goals, objectives, performance indicators and performance measures, which include compliance with the TAC, minimum size limits and pot numbers. Management of illegal, unreported and unregulated catch is also addressed.</p> <p>Compliance performance is assessed annually, and there is an annual compliance workshop. The outcomes are reported to industry at an annual Rock Lobster and Giant Crab Management Workshop. Catch and effort data reliability for target species, bycatch and byproduct is addressed in the observer program.</p>	<p>None. At the time of making the recommendation, DPI had commenced the development of a Rock Lobster and Giant Crab Compliance Strategy, which was to be implemented in 2004. DEW encouraged the timely completion of the strategy.</p> <p>A Compliance Strategy for the Victorian Rock Lobster and Giant Crab Fisheries has been developed. The strategy includes performance indicators and measures for compliance. In the western zone of the fishery, 79 at-sea inspections, 228 landing inspections and 18 post-landing inspections were conducted during 2005/06. No offences relating to giant crab were detected.</p> <p>DEW considers the Rock Lobster and Giant Crab Compliance Strategy to be adequate for the current scale of the fishery.</p>

<p><b>3.</b> In conducting its assessment of the compliance of the VGCF and its management arrangements with relevant government plans and policies, including threat abatement plans and strategies, recovery plans, bycatch policies and relevant international and regional regimes to which Australia is a party, DPI to ensure that a mechanism to require compliance with any future plans or policies is developed and included in the management regime.</p>	<p>The VGCF management plan complies with all known relevant government policies. The Victorian <i>Fisheries Act 1995</i> has provisions for management plans and regulations to be amended if required.</p>	<p>None. DEW considers that the current giant crab management arrangements comply with all relevant threat abatement plans, recovery plans, the National Policy on Fisheries Bycatch, and bycatch action strategies developed under that policy. DEW expects that Fisheries Victoria will also ensure compliance with any future plans or policies as they develop.</p>
<p><b>4.</b> Within 2 years, DPI to develop and implement an ongoing monitoring and assessment program to quantify bycatch and giant crab discards to ensure that changes in bycatch quantity and/or composition can be detected and monitored over time and to determine trends in giant crab discards for inclusion in stock assessments. Information is to be collected on an ongoing basis and independently validated.</p>	<p>Fisheries Victoria commenced an on-board observer program for the rock lobster and giant crab fisheries during 2004/05. This three year fishery-independent program will monitor discards, bycatch and interactions with protected species.</p> <p>A risk assessment workshop will be conducted at the end of the program and an ongoing monitoring program may be developed based on the outcomes of the risk assessment.</p>	<p>Continue the observer program for the full duration (until 2007/08), followed by an ecological risk assessment (ERA) for the fishery. The ERA should assess, among other things, the vulnerability and quantity of bycatch species to giant crab fishing operations. Consideration may also be given to the development of a bycatch action plan.</p> <p>DEW considers that the on-board observer program will address the lack of fishery-dependent information and will quantify bycatch and giant crab discards to ensure that changes in bycatch quantity and/or composition can be detected and monitored over time and to determine trends in giant crab discards for inclusion in stock assessments.</p> <p>In addition, it has been indicated that the Victorian catch and effort system is currently being rebuilt. It needs a significant upgrade for various reasons including the ability to accept</p>

		more information/categories of data. Part of the rebuild will include provision to store bycatch information, however the operation of this component, and the availability of data for analysis may be several years away.
<p>5. Within 12 months, the Giant Crab Fishery Assessment Group to review the research information needs and priorities to support management in the areas of sustainable use of the giant crab stock and protection of the ecosystem. In particular, analysis of research needs in areas including, but not limited to, recruitment to the fishery, fishing mortality, habitat characterisation and ecosystem impacts should be considered. A research strategy to address identified priority areas will also be developed and will include clear and achievable timeframes for implementation.</p>	<p>The Giant Crab Fishery Management Plan has a list of research priorities. This is taken from the Victorian Fisheries Co-Management Council's five-year Research Plan. Research needs and priorities are reviewed annually at the stock assessment workshop.</p> <p>To date, it seems that limited research has been conducted in the VGCF due to costs involved and low effort. The onboard observer program is the highest priority in the fishery at present.</p>	<p>While presumed fully fished, the current status of the giant crab stock remains uncertain due to the relatively short life of the history and a lack of comprehensive biological data for quantitative assessments.</p> <p>While DEW encourages the observer program, research into giant crab biology and ecology should be conducted, in collaboration with other jurisdictions, for effective management of the stock, particularly as there are concerns with stock levels in the western zone of the fishery. Once information becomes available, Fisheries Victoria should use it to develop the stock assessment model for the fishery <b>(Recommendation 4)</b>.</p>
<p>6. Develop and implement, in conjunction with other relevant jurisdictions where possible, a robust stock assessment model that incorporates reliable information on stock recruitment relationships and is informed by independent information to facilitate the setting of an annual TAC and determination of the stock status.</p>	<p>Stock assessment is currently based on Catch Per Unit Effort (CPUE) data. The Victorian Giant Crab Management Plan contains limit and target reference points, performance measures, management triggers and TAC decision rules. There is an annual stock assessment meeting and a TAC setting Forum.</p> <p>Preliminary results from a length-structured model developed under a Tasmanian Fisheries Research and</p>	<p>The primary indicator of giant crab abundance is based on CPUE data, however given the small number of active operators, random catch effort and latent effort in the fishery, CPUE data can be unstable and inaccurate. DEW therefore considers that caution is required when setting the TAC each year. Given that the status of the giant crab resource in the western zone is presumed to be fully fished, DEW considers that Fisheries Victoria needs to clearly define the strategies that will be implemented to provide greater confidence that</p>

	<p>Development Corporation (FRDC) project were presented at the 2006 Stock Assessment Workshop using data from the Victorian giant crab fishery. However, further work is required, including updating growth data from Victorian tag recaptures, before this model can be used for assessment purposes.</p>	<p>the TAC levels are sustainable. Fisheries Victoria needs to continue to liaise with Tasmania regarding this issue.</p>
<p>7. DPI to seek and participate in a formal and regular dialogue with other Australian jurisdictions responsible for managing giant crab fisheries to ensure that research and management arrangements are complementary. All available information regarding removals of target and by-product species by other jurisdictions and sectors (including Commonwealth trawlers) is to be fully accounted for in stock assessments.</p>	<p>As occurs with all major fisheries, there is regular communication with other jurisdictions and management arrangements are generally complementary. However, it is unknown to what extent this occurs.</p> <p>All available information is being considered in developing the new stock assessment model.</p>	<p>As the fishery is offshore, the physical disturbance caused by Commonwealth demersal trawlers could be a key environmental issue which should be considered when conducting the ERA. While the conflict between trawlers and giant crab boats appears to be predominantly a Tasmanian issue, Fisheries Victoria needs to continue to collaborate with other jurisdictions to monitor the situation and incorporate any information into the stock assessment and TAC setting processes.</p>
<p>8. DPI to implement within twelve months a mandatory system for the reporting of all interactions with protected species. An education program for fishers on species recognition, interaction minimisation/mitigation measures and the importance of reporting is to be developed in conjunction with the reporting system.</p>	<p>DPI has worked with the Victorian fishing industry to develop a Code of Practice for minimising wildlife entanglements, particularly whales in rock lobster/giant crab fishing gear. This was introduced in 2004/05 and DPI is monitoring the uptake of the Code of Practice by commercial fishers.</p> <p>DPI have indicated that industry will report interactions with protected species in the VGCF by April 2007. Prior to this, the observer program has monitored</p>	<p>DEW is encouraged by the initiatives in the Code of Practice but considers that ongoing attention to operator involvement and commitment to this, or similar programs, is required if the benefits are to be realised in the VGCF. In particular, DEW considers that while interactions with protected species appear to be low, there is a need to implement an education program for fishers, in conjunction with the introduction of the protected species reporting system (<b>Recommendation 2</b>).</p>

<p><b>9.</b> DPI to conduct an ecological risk assessment focussed on interactions of the fishery with bycatch and protected species, ecological communities, deepwater habitats and the marine environment to confirm assumptions that the fishery poses minimal risk to these components. The risk assessment should also include assessment of the risk of ghost fishing by lost or discarded giant crab pots in the fishery. Performance measures, targets and responses for the ongoing management of high risk areas will also be developed.</p>	<p>protected species interactions.</p> <p>A risk assessment will be conducted at the conclusion of the 3 year on-board observer program.</p> <p>Victoria is also participating in the Commonwealth risk assessment process relating to the introduction of Marine Protected Areas (MPAs) in Commonwealth waters. The outcomes of this process will be used to inform any Victorian risk assessment.</p>	<p>A recommendation has been made for Fisheries Victoria to conduct an ERA for the VGCF by the end of 2007 (<b>Recommendation 1</b>).</p>
<p><b>10.</b> DPI to collaborate with the Tasmanian Department of Primary Industries, Water and Environment and the Australian Fisheries Management Authority in any future research or data collection programs to assess the impact of harvest and incidental damage to giant crabs and their habitat by trawling activity in giant crab fishing grounds.</p>	<p>Through regular discussion and collaboration with other agencies on rock lobster research programs, Victoria is aware of the giant crab habitat mapping work being done by Tasmania, and the joint work being done by Tasmania and the Commonwealth Scientific and Industrial Research Organisation (CSIRO), in relation to trawling activity on giant crab grounds off the west coast of Tasmania.</p> <p>Victoria has offered to assist if required, but so far the study is confined to Tasmanian waters and assistance has not been sought. The conflict between trawlers and giant crab boats appears to be predominantly a Tasmanian issue. Victoria is monitoring the situation.</p>	<p>DEW believes that, where appropriate, Fisheries Victoria will continue to liaise with Tasmania, South Australia and the Australian Fisheries Management Authority on issues of common interest.</p> <p>A recommendation has been developed for Fisheries Victoria to consider the physical disturbance and incidental damage to giant crabs caused by Commonwealth demersal trawlers when conducting the ERA (<b>Recommendation 1</b>).</p>

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

**Please Note** – the table below is not a complete or exact representation of the EPBC Act. It is intended as a summary of relevant sections and components of the EPBC Act to provide advice on the fishery in relation to decisions under Parts 13 and 13A. A complete version of the EPBC Act can be found on the DEW website.

**Part 13**

<p><b>Division 1 Listed threatened species</b>  <b>Section 208A Minister may accredit plans or regimes</b></p>	<p><b>DEW assessment of the VGCF</b></p>
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p style="padding-left: 40px;">(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is:</p> <p style="padding-left: 80px;">i. made by a State or self-governing Territory; and</p> <p style="padding-left: 80px;">ii. in force under a law of the State or self-governing Territory;</p> <p>if <b>satisfied</b> that:</p> <p style="padding-left: 40px;">(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy to take all reasonable steps to ensure that members of listed threatened species (other than conservation dependent species) are not killed or injured as a result of the fishing; and</p>	<p>The VGCF is managed under the <i>Giant Crab Fishery Management Plan 2003</i>, in force under the <i>Victorian Fisheries Act 1995</i>.</p> <p>The <i>Giant Crab Fishery Management Plan 2003</i> was accredited in March 2004 under Part 13 of the EPBC Act. The management arrangements for the fishery have not changed since this accreditation was granted. However it should be noted that the management plan will expire in 2008, with a review of the plan to commence in 2007. This review will examine all aspects of the fishery’s management against objectives, performance indicators and reference points. Fisheries Victoria will need to advise DEW when this change occurs, in order for DEW to make an assessment that the new arrangements are equivalent or better, in terms of ecological sustainability, than those in place at the time of the original decision.</p> <p>Once the new management plan is developed a new Part 13</p>

<p>(g) the fishery to which the plan, regime or policy relates does not, or is not likely to, adversely affect the survival or recovery in nature of the species.</p>	<p>accreditation will be required to ensure operators are protected from the offence provisions under Part 13 of the EPBC Act.</p> <p>Currently, evidence suggests that the VGCF has minimal interactions with listed threatened species. Therefore, DEW considers the current operation of the VGCF is not likely to adversely affect the survival or recovery in nature of any threatened species.</p>
---	--

<p><b>Division 2 Migratory species</b> <b>Section 222A Minister may accredit plans or regimes</b></p>	<p><b>DEW assessment of the VGCF</b></p>
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is:</p> <ul style="list-style-type: none"> <li>i. made by a State or self-governing Territory; and</li> <li>ii. in force under a law of the State or self-governing Territory;</li> </ul> <p>if <b>satisfied</b> that:</p> <p>(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy to take all reasonable steps to ensure that members of listed migratory species are not killed or injured as a result of the fishing; and</p>	<p>The VGCF is managed under the <i>Giant Crab Fishery Management Plan 2003</i>, in force under the <i>Victorian Fisheries Act 1995</i>.</p> <p>The <i>Giant Crab Fishery Management Plan 2003</i> was accredited in March 2004 under Part 13 of the EPBC Act. The management arrangements for the fishery have not changed since this accreditation was granted. However it should be noted that the management plan will expire in 2008, with a review of the plan to commence in 2007. This review will examine all aspects of the fishery's management against objectives, performance indicators and reference points. Fisheries Victoria will need to advise DEW when this change occurs, in order for DEW to make an assessment that the new arrangements are equivalent or better, in terms of ecological sustainability, than those in place at the time of the original decision.</p>

<p>(g) the fishery to which the plan, regime or policy relates does not, or is not likely to, adversely affect the conservation status of a listed migratory species or a population of that species.</p>	<p>Once the new management plan is developed a new Part 13 accreditation will be required to ensure operators are protected from the offence provisions under Part 13 of the EPBC Act.</p> <p>The report provided by Fisheries Victoria indicates that there has been observed sightings of migratory whales (southern right whales) in the VGCF. However, this occurrence was observed in the vicinity of giant crab fishing operations and no interactions occurred. Therefore, DEW considers the current operation of the VGCF is not likely to adversely affect the survival or recovery in nature of any listed migratory species.</p>
---	---

<p><b>Division 3 Whales and other cetaceans</b> <b>Section 245 Minister may accredit plans or regimes</b></p>	<p><b>DEW assessment of the VGCF</b></p>
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is:</p> <ul style="list-style-type: none"> <li>i. made by a State or self-governing Territory; and</li> <li>ii. in force under a law of the State or self-governing Territory;</li> </ul> <p>if <b>satisfied</b> that:</p> <p>(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy to take all reasonable steps to ensure that cetaceans are not killed or injured as a result of the fishing; and</p>	<p>The VGCF is managed under the <i>Giant Crab Fishery Management Plan 2003</i>, in force under the <i>Victorian Fisheries Act 1995</i>.</p> <p>The <i>Giant Crab Fishery Management Plan 2003</i> was accredited in March 2004 under Part 13 of the EPBC Act. The management arrangements for the fishery have not changed since this accreditation was granted. However it should be noted that the management plan will expire in 2008, with a review of the plan to commence in 2007. This review will examine all aspects of the fishery's management against objectives, performance indicators and reference points. Fisheries Victoria will need to advise DEW when this change occurs, in order for DEW to make an assessment that the new arrangements</p>

<p>(g) the fishery to which the plan, regime or policy 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>are equivalent or better, in terms of ecological sustainability, than those in place at the time of the original decision.</p> <p>Once the new management plan is developed a new Part 13 accreditation will be required to ensure operators are protected from the offence provisions under Part 13 of the EPBC Act.</p> <p>The report provided by Fisheries Victoria indicates that there have been six observed sightings of southern right whales in the VGCF since 2004/05. However, this occurrence was observed in the vicinity of giant crab fishing operations and no interactions occurred. Therefore, DEW considers the current operation of the VGCF is not likely to adversely affect the conservation status of a species of cetacean or a population of that species.</p>
--	---

<p><b>Division 4 Listed marine species</b> <b>Section 265 Minister may accredit plans or regimes</b></p>	<p><b>DEW assessment of the VGCF</b></p>
<p>(1) Minister may, by instrument in writing, accredit for the purposes of this Division:</p> <p>(c) a plan of management, or a policy, regime or any other arrangement, for a fishery that is:</p> <ul style="list-style-type: none"> <li>i. made by a State or self-governing Territory; and</li> <li>ii. in force under a law of the State or self-governing Territory;</li> </ul> <p>if <b>satisfied</b> that:</p> <p>(f) the plan, regime or policy requires persons engaged in fishing under the plan, regime or policy to take all reasonable steps to ensure that members of listed marine species are not killed or injured as a result of the fishing; and</p>	<p>The VGCF is managed under the <i>Giant Crab Fishery Management Plan 2003</i>, in force under the <i>Victorian Fisheries Act 1995</i>.</p> <p>The <i>Giant Crab Fishery Management Plan 2003</i> was accredited in March 2004 under Part 13 of the EPBC Act. The management arrangements for the fishery have not changed since this accreditation was granted. However it should be noted that the management plan will expire in 2008, with a review of the plan to commence in 2007.</p>

<p>(g) the fishery to which the plan, regime or policy 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>This review will examine all aspects of the fishery’s management against objectives, performance indicators and reference points. Fisheries Victoria will need to advise DEW when this change occurs, in order for DEW to make an assessment that the new arrangements are equivalent or better, in terms of ecological sustainability, than those in place at the time of the original decision.</p> <p>Once the new management plan is developed a new Part 13 accreditation will be required to ensure operators are protected from the offence provisions under Part 13 of the EPBC Act.</p> <p>Currently, evidence suggests that the VGCF only has minimal interactions with listed marine species. Therefore, DEW considers the current operation of the VGCF 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 VGCF</b>
<p>(1) Minister may, by instrument published in the Gazette, amend the list referred to in section 303DB (list of exempt native specimens) by:</p> <ul style="list-style-type: none"> <li>(a) including items in the list;</li> <li>(b) deleting items from the list; or</li> <li>(c) imposing a condition or restriction to which the inclusion of a specimen in the list is subject; or</li> <li>(d) varying of revoking a condition or restriction to which the inclusion of a specimen in the list is subject; or</li> <li>(e) correcting an inaccuracy or updating the name of a species.</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>(f) must consult such other Minister or Ministers as the</li> </ul>	<p>The public comment period on Fisheries Victoria’s <i>Submission for Reassessment of the Victorian Giant Crab Fishery</i> sought comment on the submission and provided sufficient opportunity for consultation</p>

<p>(g) Minister considers appropriate; and must consult such other Minister or Ministers of each State and self-governing Territory as the Minister considers appropriate; and</p> <p>(h) may consult such other persons and organisations as the Minister considers appropriate.</p>	<p>with other persons and organisations.</p> <p>The letter to the Hon Joe Helper MP, Minister for Agriculture advises him of the intention to declare the fishery a Wildlife Trade Operation (WTO) under Part 13A of the EPBC Act.</p>
<p>(5) A copy of an instrument made under section 303DC is to be made available for inspection on the Internet.</p>	<p>The instrument for the VGCF made under section 303DC will be gazetted and made available on the DEW website.</p>

Section 303FN Approved wildlife trade operation	DEW assessment of the VGCF
<p>(2) 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>(3) The Minister must not declare an operation as an approved wildlife trade operation unless the Minister is <b>satisfied</b> that:</p> <p>(a) the operation is consistent with the objects of Part 13A of the Act; and</p> <p>(b) the operation will not be detrimental to:</p> <ol 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</li> </ol>	<p>The VGCF 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 fishery is unlikely to be unsustainable and threaten biodiversity within the next three years</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 VGCF will not be detrimental to the survival or conservation status of a taxon to which it relates within the next <b>three years</b>, given the management measures currently in place, which</p>

<p>relates; and</p> <p>(ba) the operation will not be likely to threaten any relevant ecosystem including (but not limited to) any habitat or biodiversity; and</p> <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>include limited entry; an ITQ system with a TAC of 25 tonnes for the western zone; legal minimum size limits for both males and females; closed seasons: gear restrictions; and the protection of berried females.</p> <p>DEW considers that the VGCF will not threaten any relevant ecosystem within the next <b>three years</b>, given the management measures currently in place, which include limited entry; an ITQ system with a TAC of 25 tonnes for the western zone; legal minimum size limits for both males and females; closed seasons: gear restrictions; and the protection of berried females.</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>(4) 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 VGCF will not have a significant impact on any relevant ecosystem within the next <b>three years</b>, given the management measures currently in place, which include limited entry; an ITQ system with a TAC of 25 tonnes for the western zone; legal minimum size limits for both males and females; closed seasons: gear restrictions; and the protection of berried females.</p> <p>The management arrangements that will be employed for the VGCF are likely to be effective. Management arrangements for the fishery are included in the <i>Giant Crab Fishery Management Plan 2003</i>, in force under the <i>Victorian Fisheries Act 1995</i>. Management arrangements include limited entry; an ITQ system with a TAC of 25 tonnes for the</p>

	<p>western zone; legal minimum size limits for both males and females; closed seasons: gear restrictions; and the protection of berried females. The performance of the fishery is reviewed annually, against a series of management objectives.</p>
<p>(5) 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>(c) whether, in the opinion of the Minister, the legislation is effective.</p>	<p>The VGCF is managed under the <i>Giant Crab Fishery Management Plan 2003</i>, in force under the <i>Victorian Fisheries Act 1995</i>.</p> <p>The <i>Giant Crab Fishery Management Plan 2003</i> and <i>Fisheries Regulations 1998</i> in force under the <i>Victorian Fisheries Act 1995</i> apply throughout Victorian waters.</p> <p>The management arrangements that will be employed for the VGCF are likely to be effective. Management arrangements for the fishery are included in the <i>Giant Crab Fishery Management Plan 2003</i>, in force under the <i>Victorian Fisheries Act 1995</i>. Management arrangements include limited entry; an ITQ system with a TAC of 25 tonnes for the western zone; legal minimum size limits for both males and females; closed seasons: gear restrictions; and the protection of berried females. The performance of the fishery is reviewed annually, against a series of management objectives.</p>
<p>(10) 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 VGCF is a commercial fishery.</p>

<b>Section 303FR Public consultation</b>	<b>DEW assessment of the VGCF</b>
<p>(1) Before making a declaration under section 303FN, the Minister must cause to be published on the Internet a notice:</p> <ul style="list-style-type: none"> <li>(a) setting out the proposal to make the declaration; and</li> <li>(b) setting out sufficient information to enable persons and organisations to consider adequately the merits of the proposal; and</li> <li>(c) inviting persons and organisations to give the Minister, within the period specified in the notice, written comments about the proposal.</li> </ul>	<p>A public notice, which set out the proposal to grant export approval to the VGCF and included the <i>Submission for Reassessment of the Victorian Giant Crab Fishery</i> (the submission), was released for public comment which closed on Friday 9 March 2007 with no submissions received.</p>
<p>(2) A period specified in the notice must not be shorter than 20 business days after the date on which the notice was published on the Internet.</p>	<p>A public notice, which set out the proposal to grant export approval to the VGCF and included the <i>Submission for Reassessment of the Victorian Giant Crab Fishery</i> (the submission), was released for public comment on 9 February 2007 and closed on 9 March 2007, a total of 21 business days.</p>
<p>(3) In making a decision about whether to make a declaration under section 303FN, the Minister must consider any comments about the proposal to make the declaration that were given in response to the invitation in the notice.</p>	<p>No public comments about the proposal were received.</p>

<b>Section 303FT Additional provisions relating to declarations</b>	<b>DEW assessment of the VGCF</b>
<p>(1) This section applies to a declaration made under section 303FN.</p>	<p>A declaration for the VGCF will be made under section 303FN.</p>
<p>(4) The Minister may make a declaration about a plan or operation even though he or she considers that the plan or operation should be the subject of the declaration only:</p> <ul style="list-style-type: none"> <li>(a) during a particular period; or</li> <li>(b) while certain circumstances exist; or</li> <li>(c) while a certain condition is complied with.</li> </ul>	<p>The standard conditions applied to commercial fishery WTOs include:</p> <ul style="list-style-type: none"> <li>• operation in accordance with the management regime</li> <li>• notifying DEW of changes to the management regime</li> <li>• annual reporting.</li> </ul> <p>It is recommended the standard conditions are applied to the VGCF WTO declaration.</p>

In such a case, the instrument of declaration is to specify the period, circumstances or condition.	The WTO instrument for the VGCF specifies the conditions applied.
(8) A condition may relate to reporting or monitoring.	One of the standard conditions relates to reporting.
(9) The Minister must, by instrument published in the <i>Gazette</i> , revoke a declaration if he or she is satisfied that a condition of the declaration has been contravened.	
(11) A copy of an instrument under section 303FN or this section is to be made available for inspection on the Internet.	The instrument for the VGCF made under section 303FN will be gazetted and made available on the DEW website.

### Part 16

<b>Section 391 Minister must consider precautionary principle in making decisions</b>	<b>DEW assessment of the VGCF</b>
(1) 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.	You must consider the precautionary principle when making a decision to include specimens on the LENS.
(2) 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;
- (h) to ensure the precautionary principle is taken into account in making decisions relating to the utilisation of wildlife.

## Final recommendations to Fisheries Victoria for the VGCF

The material submitted by Fisheries Victoria demonstrates that the management arrangements for the VGCF continue to meet most of the requirements of the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries*. The VGCF is relatively well managed, with a range of management measures in place to promote the ecologically sustainable harvesting of species from the fishery. These measures include: limited entry; zonal management; ITQ system with a TAC of 25 tonnes for the western zone; minimum carapace lengths for both males and females; closed seasons: gear restrictions; and the protection of berried females.

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

- the fully fished status of the Victorian giant crab stock in the western zone of the fishery;
- the development of a new management plan which needs to continue the process of rebuilding the giant crab stock in the western zone of the fishery and implement Fisheries Victoria's commitments to improve the management of the fishery;
- the need to continue to develop the stock assessment model and review model predictions for the fishery to ensure that TAC levels continue to permit significant stock rebuilding for the giant crab stock;
- the need to conduct an ERA to address the fishery's impacts on bycatch and protected species, ecological communities and the marine environment;
- the need to develop and implement a protected species education program for fishers in conjunction with the introduction of the new protected species reporting system; and
- a lack of research into giant crab biology and ecology.

On balance, 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 concerns for this fishery are the fully fished status of the giant crab stock in the western zone of the fishery and the lack of a robust stock assessment model to ensure that TAC levels continue to permit significant stock rebuilding for the giant crab stock. DEW therefore recommends that the fishery be declared an approved WTO for a period of three years with the actions specified in the recommendations to be undertaken by Fisheries Victoria to contain the environmental risks in the long term. DEW is satisfied that the fishery, as managed in accordance with the management regime is not likely to cause serious or irreversible ecological damage over the period of the export decision. The WTO declaration will require annual reporting on the progress of implementing the recommendations of this report and other managerial commitments.

As part of the 2004 assessment, the fishery was assessed under Part 13 of the EPBC Act in regards to the impact of the fishery on listed threatened species, listed migratory species, cetaceans and listed marine species. The *Giant Crab Fishery Management Plan 2003* was accredited under sections 208A, 222A, 245 and 265 of the EPBC Act in 2004 and as there have been no management changes since the last assessment, DEW considers that this accreditation still stands for this fishery.

Once the new Management Plan comes into affect for this fishery in mid 2008, Fisheries Victoria will need to advise DEW of the changes so that a determination can be made on whether new decisions under Part 13 and 13A of the EPBC Act are required.

Recommendations are provided below with a brief explanation of the related issue/intent. Unless a specific time frame is provided in the recommendation each recommendation must be addressed within the life of the fishery's declaration (3 years).

**Table 4: VGCF Assessment– Summary of Issues, Conditions and Recommendations March, 2007**

	<b>Issue</b>	<b>Condition</b>
1	<p><u>General Management</u>            Export decisions relate to the arrangements in force at the time of the decision. In order to ensure that these decisions remain valid and export approval continues uninterrupted, 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. This includes legislated amendments that may affect sustainability of the target species or negatively impact on byproduct, bycatch, protected species or the ecosystem.</p>	<p><b>Condition 1:</b> Operation of the fishery will be carried out in accordance with the management regime for the fishery in force under the <i>Giant Crab Fishery Management Plan 2003</i> and the <i>Victorian Fisheries Act 1995</i>.</p> <p><b>Condition 2:</b> Fisheries Victoria to inform the Department of the Environment and Water Resources of any material change to the Victorian Giant Crab Fishery management 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 any change being made.</p>
2	<p><u>Annual Reporting</u>            It is important that reports be produced and presented to DEW annually in order for the performance of the fishery and progress in implementing the recommendations in this report and other managerial commitments to be monitored and assessed throughout the life of the declaration. Annual reports should include a description of the fishery, management arrangements in place, recent catch data for all sectors of the fishery, status of target stock, interactions with protected species, impacts of the fishery on the ecosystem in which it operates, progress in implementing DEW recommendations and research and monitoring outcomes.</p>	<p><b>Condition 3:</b> Reports to be produced and presented to the Australian Government Department of Environment and Water Resources annually, and to include:</p> <ul style="list-style-type: none"> <li>• a description of the status of the fishery, catch and effort information and the total allowable catch setting process and outcomes of that process;</li> <li>• the performance of the fishery against stated goals, objectives, strategies and reference points;</li> <li>• research undertaken or completed</li> </ul>

		<p>relevant to the fishery; and</p> <ul style="list-style-type: none"> <li>• an outline of progress in implementing the recommendations made in the <i>Assessment of the Victorian Giant Crab Fishery 2007</i>.</li> </ul>
	<b>Issue</b>	<b>Recommendation</b>
1	<p><u>Ecological Risk Assessment</u></p> <p>While the potential of the VGCF to impact unsustainably on the environment generally is considered low, uncertainties still exist regarding impacts on bycatch and protected species. Collection from an onboard observer program of fishery-independent information commenced in 2004/05 on the fishery's impacts on bycatch (including undersized, damaged or berried females) and protected species. An assessment of this information has not commenced, however Fisheries Victoria have indicated that an ERA will be conducted at the completion of the observer program.</p> <p>As the fishery is offshore, the physical disturbance caused by Commonwealth demersal trawlers could be a key environmental issue which should be considered when conducting the ERA. While the conflict between trawlers and giant crab boats appears to be predominantly a Tasmanian issue, Fisheries Victoria needs to continue to collaborate with other jurisdictions to monitor the situation and incorporate any information into the stock assessment and TAC setting processes.</p> <p>DEW considers that an ERA should be conducted for the fishery towards the end of 2007, which coincides with the completion of the three year observer program and the review of the management plan. Information derived from the observer program, the protected species interactions forms (to be introduced in April 2007) and the ERA should be used to review and develop meaningful performance indicators and trigger points for the fishery and inform the review process of the giant crab management plan to ensure the ongoing sustainable management of the fishery.</p>	<p><b>Recommendation 1:</b> By the end of 2007, Fisheries Victoria to conduct an ecological risk assessment for the VGCF. The risk assessment should focus on the fishery's impacts on bycatch and protected species, ecological communities and the marine environment. The risk assessment should also include an assessment of the potential impact of trawling operations on Victorian giant crab habitats and the risk of ghost fishing by lost or discarded pots in the fishery. Fisheries Victoria to develop appropriate management responses to any high risks identified.</p>

2	<p><u>Code of Practice &amp; Education Program</u></p> <p>DEW notes that Fisheries Victoria has worked with the Victorian industry to develop a Code of Practice for minimising wildlife entanglements, particularly whales, in rock lobster/giant crab gear. The code mainly relates to the way in which fishing gear is set, with particular attention to the length of the pot lines. Fisheries Victoria is monitoring the uptake of the Code of Practice, and most fishers are complying.</p> <p>Fisheries Victoria is also proposing to introduce a mandatory reporting process for the VGCF for all interactions with protected species in April 2007. Licence holders will be provided with forms in their daily catch logs for reporting the details of any interactions.</p> <p>DEW is encouraged by the initiatives in the Code of Practice but considers that ongoing attention to operator involvement and commitment to this, or similar programs, is required if the benefits are to be realised in the VGCF. In particular, DEW considers that while interactions with protected species appear to be low, there is a need to implement an education program for fishers, in conjunction with the introduction of the protected species reporting system, on protected species recognition, interaction minimisation/mitigation methods and the importance and obligation of reporting.</p>	<p><b>Recommendation 2:</b> Fisheries Victoria, in collaboration with industry, to continue to encourage the adoption of programs that minimise protected species interactions and pot loss. Within 18 months, Fisheries Victoria to develop and implement an education program for fishers on species recognition, mitigation measures to minimise interactions and the requirements to accurately report interactions under the EPBC Act.</p>
3	<p><u>Stock Assessment Model</u></p> <p>Stock assessment is currently based on Catch Per Unit Effort (CPUE) data. The Victorian giant crab management plan contains limit and target reference points, performance measures, management triggers and TAC decision rules. There is an annual stock assessment meeting and a TAC setting forum.</p> <p>Preliminary results from a length-structured model developed under a Tasmanian FRDC project were presented at a Stock Assessment Workshop in 2006 using data from the VGCF. However DEW notes that further work is required, including updating growth data from Victorian tag recaptures, before this model can be used for assessment purposes.</p>	<p><b>Recommendation 3:</b> Fisheries Victoria to continue to actively develop the length-structured stock assessment model for the VGCF and review model predictions to ensure that TAC levels continue to permit significant stock rebuilding for the giant crab stock.</p>

	<p>The growth data will be updated in time for the 2007 stock assessment, however the model is still in the developmental stage and it is likely to be a few years before it can be used for stock assessment and TAC setting purposes. While Fisheries Victoria have indicated that it appears giant crab stocks are rebuilding in Victoria since the introduction of quota management and minimum size limits, there is no stock assessment model which supports this prediction. The primary indicator of giant crab abundance is based on CPUE data, however given the small number of active operators, random catch effort and latent effort in the fishery, CPUE data can be unstable and inaccurate. DEW therefore considers that caution is required when setting the TAC each year as the continued recovery of the VGCF is dependent upon the balance between catches and recruitment levels. Given that the status of the giant crab resource in the western zone is presumed to be fully fished, DEW considers that Fisheries Victoria needs to clearly define the strategies that will be implemented to provide greater confidence that the TAC levels are sustainable in the longer term and ensure that the biomass levels are maintained at ecologically sustainable levels.</p>	
4	<p><u>Research</u></p> <p>While presumed fully fished, the current status of the giant crab stock remains uncertain due to the relatively short life of the history and a lack of comprehensive biological data for quantitative assessments. Research and development is an important component of the VGCF management because the giant crab resource, productivity and population dynamics are not well understood. While research priorities are listed in the giant crab management plan, many of these were not started as research resources and funds are limited due to the relatively low catch and value of the fishery.</p> <p>Fisheries Victoria has indicated that the current priority is the on-board observer program that is addressing bycatch, discards and protected species issues, as well as verifying catch and effort data. While DEW encourages the observer program, research into giant crab biology and ecology should be conducted, in collaboration with other jurisdictions, for effective management of the stock, particularly as there are concerns with stock levels in the western zone of the fishery. Once information becomes</p>	<p><b>Recommendation 4:</b> Fisheries Victoria, in collaboration with other jurisdictions, to develop and conduct research into the growth and population dynamics of giant crabs in Victoria. Once information becomes available, Fisheries Victoria should use it to develop the stock assessment model and, where appropriate, biological performance measures and indicators to ensure the ecologically sustainable management of the fishery.</p>

	<p>available, Fisheries Victoria should use it to develop the stock assessment model and biological performance measures and indicators to ensure the ecologically sustainable management of the fishery. Where appropriate, further research should also be conducted into the optimal dimensions (size, shape and position) of escape gaps to protect undersized giant crabs.</p>	
5	<p><u>Management response to performance triggers</u>  The giant crab management plan advises that a TAC review will be triggered if the annual commercial catches increase or decrease to pre-determined CPUE levels. While DEW notes the prescribed management responses involve considering the management implications for maintaining, increasing or decreasing the TAC, there is currently no time frame for implementation of this action following the triggering of a reference point. DEW considers that a three month timeframe should be applied to the management response in order to determine a timely and appropriate response to the deviation.</p>	<p><b>Recommendation 5:</b> Fisheries Victoria to monitor the status of the target species in relation to performance indicators. Within 3 months of becoming aware of a performance indicator being triggered, Fisheries Victoria to develop a clear timetable for the implementation of appropriate management responses.</p>

## Acronyms

CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CPUE	Catch Per Unit Effort
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DEW	Department of the Environment and Water Resources
DPI	Department of Primary Industries
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
ERA	Ecological Risk Assessment
FRDC	Fisheries Research and Development Corporation
ITQs	Individual Transferable Quotas
LENS	List of Exempt Native Specimens
MPA	Marine Protected Area
TAC	Total Allowable Catch
VGCF	Victorian Giant Crab Fishery
WTO	Wildlife Trade Operation