



Australian Government

Department of the Environment and Energy

Assessment of the
South Australian Blue Crab Fishery

November 2015

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This report should be attributed as '*Assessment of the South Australian Blue Crab Fishery November 2015*, Commonwealth of Australia 2015'.

Disclaimer

This document is an assessment carried out by the Department of the Environment and Energy of a commercial fishery against the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition*. It forms part of the advice provided to the Minister for the Environment and Energy 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 Energy or the Australian Government.

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SECTION 1: SUMMARY OF THE ASSESSMENT FOR THE SOUTH AUSTRALIAN BLUE CRAB FISHERY AGAINST THE GUIDELINES FOR THE ECOLOGICALLY SUSTAINABLE MANAGEMENT OF FISHERIES (2ND EDITION)

Purpose: To enable transparent articulation of which commercial fisheries assessed under the EPBC Act clearly meet all legislative requirements and all Guidelines, and those which may require further investigation or assessment to demonstrate requirements are met.

Summary: Overview of South Australian Blue Crab Fishery against the relevant requirements of the Guidelines and the EPBC Act.

Guidelines	Meets	Partially meets	Does not meet	Details
Management regime	8 of 9	1 of 9		Management arrangements for the South Australian Blue Crab Fishery (the fishery) are readily available and developed with transparent process, however a range of community interests are not involved in ongoing management arrangements.
Principle 1 (target stocks)	11 of 11			Robust and active management of target stocks.
Principle 2 (bycatch and TEPS)	12 of 12			Byproduct minimal and bycatch negligible.
Principle 2 (ecosystem impacts)	5 of 5			Potential ecosystem impacts identified comprehensively in ERA and addressed in management plan.
EPBC requirements				
Part 12	N/a			No bioregional plan
Part 13	N/a			No Part 13 accreditation is required for this fishery.
Part 13A	All, but for 1			Limited consultation if LENS is amended, although sufficient for strict requirements, as per advice to Minister in MS14-002367.
Part 16	All met			Precautionary measures built into management arrangements.
Conclusion: This fishery targets Blue Swimmer Crab (<i>Portunus amatus</i>) using pots. It operates entirely in state waters in two separate management zones (Spencer Gulf and Gulf St Vincent). Management arrangements have been effective over the last three years to rebuild stocks after annual stock assessments indicated low relative abundance in 2012. There are no bycatch or protected species concerns in this fishery, therefore it meets all environmental requirements of the EPBC Act and most of the Guidelines.				
Final recommendation for 2015 assessment of SA Blue Crab Fishery: Low risk, eligible for 10 year approval (2015-2025).				

Notes:**Assessment history:**

The assessment history for the South Australian Abalone Fishery is available on the Departments website at <http://environment.gov.au/marine/fisheries/sa/abalone>.

1st assessment finalised June 2004 – Exempt from export provisions of Part 13A of the EPBC Act until 21 June 2009 (GN 34, 25 August 2004). Export approval was subject to 11 recommendations. Accredited under Part 13 in November 2007.

2nd assessment finalised 2010 – LENS with 5 recs. No public comments received.

No Part 13, all fishing in state waters.

Fishery reporting:**Annual report**

– last provided in July 2014

Protected species interactions

– All SA fishery interactions provided annually and are publicly available on the Research Report Series section of the SARDI website at http://pir.sa.gov.au/research/publications/research_report_series.

– Last published February 2014 (fishing year of 2012/13):

[http://pir.sa.gov.au/data/assets/pdf_file/0011/232400/Wildlife Interactions in SA Fisheries 2013 - FINAL.pdf](http://pir.sa.gov.au/data/assets/pdf_file/0011/232400/Wildlife_Interactions_in_SA_Fisheries_2013_-_FINAL.pdf).

Key links:

– Fishery information page on Department of Primary Industries and Regions SA (PIRSA) website, including latest stock assessment

http://pir.sa.gov.au/fishing/commercial_fishing/commercial_fisheries/blue_crab_fishery.

– Management Plan for the SA Commercial Blue Crab Fishery – January 2012 (expires 2017). Contains harvest strategy and is available at

[http://pir.sa.gov.au/data/assets/pdf_file/0015/12750/Blue Crab Fishery Management Plan 2012.pdf](http://pir.sa.gov.au/data/assets/pdf_file/0015/12750/Blue_Crab_Fishery_Management_Plan_2012.pdf).

– Ecological Risk Assessment 2009

[http://pir.sa.gov.au/data/assets/pdf_file/0009/173997/ESD Blue Crab Report.pdf](http://pir.sa.gov.au/data/assets/pdf_file/0009/173997/ESD_Blue_Crab_Report.pdf).

– FRDC Status of Key Australian Fish Stocks 2014 – Blue Swimmer Crab. Status in SA: Spencer Gulf = sustainable, Gulf St Vincent = transitional-recovering

SECTION 2: DETAILED ANALYSIS OF THE SOUTH AUSTRALIAN BLUE CRAB FISHERY AGAINST THE GUIDELINES FOR THE ECOLOGICALLY SUSTAINABLE MANAGEMENT OF FISHERIES (2ND EDITION)

Guidelines for the Ecologically Sustainable Management of Fisheries (2nd edition)	Comment
THE MANAGEMENT REGIME	
The management regime does not have to be a formal statutory fishery management plan as such, and may include non-statutory management arrangements or management policies and programs. The regime should:	
Be documented, publicly available and transparent	The South Australian Blue Crab Fishery (the fishery) is managed through publicly available legislation. Management plan for the South Australian Commercial Blue Crab Fishery – January 2012 (Fishery Management Plan) also available online (links above).
Be developed through a consultative process providing opportunity to all interested and affected parties, including the general public	The management plan is developed through consultative process, including public consultation.
Ensure that a range of expertise and community interests are involved in individual fishery management committees and during the stock assessment process	Co-managed between PIRSA and representative industry body. No formal management committee but a harvest strategy review committee involving independent chair and scientists.
Be strategic, containing objectives and performance criteria by which the effectiveness of the management arrangements are measured	Yes, goals, objectives, strategies and performance indicators addressed in the Fishery Management Plan.
Be capable of controlling the level of harvest in the fishery using input and/or output controls	Yes, input and output controls, including limited entry, spatial restrictions, daily limits and total allowable commercial catch (TACC).
Contain the means of enforcing critical aspects of the management arrangements	Compliance risk assessment conducted annually, followed by annual development of compliance plan.
Provide for the periodic review of the performance of the fishery management arrangements and the management strategies, objectives and criteria	Stock assessment and TACCs reviewed annually. In SA, management plans are reviewed after 5 years operation.
Be capable of assessing, monitoring and avoiding, remedying or mitigating any adverse impacts on the wider marine ecosystem in which the target species lives and the fishery operates	An ecological risk assessment (ERA) was conducted in 2009. Risks addressed in the Fishery Management Plan (Goal 3). Strategic Research Plan to improve understanding of environmental drivers over 5 years.
Requires compliance with relevant threat abatement plans, recovery plans, the National Policy on Fisheries Bycatch, and bycatch action strategies developed under the policy	No significant intersection with Commonwealth plans.
PRINCIPLE 1 - A fishery must be conducted in a manner that does not lead to over-fishing, or for those stocks that are over-fished, the fishery must be conducted such that there is a high degree of probability the stock(s) will recover.	
Objective 1 - The fishery shall be conducted at catch levels that maintain ecologically viable stock levels at an agreed point or range, with acceptable levels of probability.	
Information requirements	
1.1.1 There is a reliable information collection system in place appropriate to the scale of the fishery. The level of data collection should be based upon an appropriate mix of fishery independent and dependent research and monitoring.	Yes, mandatory logbooks are used to record daily catch and effort. Fishery independent surveys are undertaken on an annual or biennial basis.

Assessment	
1.1.2 There is a robust assessment of the dynamics and status of the species/fishery and periodic review of the process and the data collected. Assessment should include a process to identify any reduction in biological diversity and /or reproductive capacity. Review should take place at regular intervals but at least every three years.	Yes, annual stock assessments consider fishery dependent and independent data.
1.1.3 The distribution and spatial structure of the stock(s) has been established and factored into management responses.	Yes, stock in each gulf managed separately.
1.1.4 There are reliable estimates of all removals, including commercial (landings and discards), recreational and indigenous, from the fished stock. These estimates have been factored into stock assessments and target species catch levels.	Recreational and Indigenous harvest included in allocations and incorporated in stock assessments. Recreational survey recently completed in SA (2013/14).
1.1.5 There is a sound estimate of the potential productivity of the fished stock/s and the proportion that could be harvested.	Yes, annual stock assessments include consideration of fishery independent surveys.
Management responses	
1.1.6 There are reference points (target and/or limit), that trigger management actions including a biological bottom line and/or a catch or effort upper limit beyond which the stock should not be taken.	Yes, harvest decision rules articulated in harvest strategy, which is within the Fishery Management Plan.
1.1.7 There are management strategies in place capable of controlling the level of take.	Yes, both input and output controls.
1.1.8 Fishing is conducted in a manner that does not threaten stocks of by-product species.	Byproduct extremely low, considered in ERA and Fishery Management Plan.
(Guidelines 1.1.1 to 1.1.7 should be applied to by-product species to an appropriate level)	
1.1.9 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	Appears likely, based on historic performance.
If overfished, go to Objective 2: If not overfished, go to PRINCIPLE 2:	
Objective 2 - Where the fished stock(s) are below a defined reference point, the fishery will be managed to promote recovery to ecologically viable stock levels within nominated timeframes.	
Management responses	
1.2.1 A precautionary recovery strategy is in place specifying management actions, or staged management responses, which are linked to reference points. The recovery strategy should apply until the stock recovers, and should aim for recovery within a specific time period appropriate to the biology of the stock.	Fishery Management Plan articulates control rules should performance triggers be breached.
1.2.2 If the stock is estimated as being at or below the biological and / or effort bottom line, management responses such as a zero targeted catch, temporary fishery closure or a 'whole of fishery' effort or quota reduction are implemented.	Yes, in response to low relative abundance of pre-recruits in 2012 in Gulf St Vincent, a temporal closure, TACC reduction and recreational bag and boat limit reduction were implemented in 2013-14 and 2014-15. Recent assessment indicates this has been effective to recover stock.

PRINCIPLE 2 - Fishing operations should be managed to minimise their impact on the structure, productivity, function and biological diversity of the ecosystem.	
Objective 1 - The fishery is conducted in a manner that does not threaten bycatch species.	
Information requirements	
2.1.1 Reliable information, appropriate to the scale of the fishery, is collected on the composition and abundance of bycatch.	Yes, mandatory daily logbooks, data summarised in annual reports.
Assessments	
2.1.2 There is a risk analysis of the bycatch with respect to its vulnerability to fishing.	Yes, bycatch included in 2009 ERA. Fishery independent research indicates bycatch is extremely low.
Management responses	
2.1.3 Measures are in place to avoid capture and mortality of bycatch species unless it is determined that the level of catch is sustainable (except in relation to endangered, threatened or protected species). Steps must be taken to develop suitable technology if none is available.	Not required as bycatch minimal.
2.1.4 An indicator group of bycatch species is monitored.	Annual fishery independent research monitors bycatch species. Highest volume bycatch species is Rock Crab (<i>Ozius truncatus</i>), which are generally released alive.
2.1.5 There are decision rules that trigger additional management measures when there are significant perturbations in the indicator species numbers.	Not required.
2.1.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	Not applicable.
Objective 2 - The fishery is conducted in a manner that avoids mortality of, or injuries to, endangered, threatened or protected species and avoids or minimises impacts on threatened ecological communities.	
Information requirements	
2.2.1 Reliable information is collected on the interaction with endangered, threatened or protected species and threatened ecological communities.	Interactions reported in mandatory daily logbooks. Only interactions reported since 2007 have been two leatherback turtle entanglements, both of which were released alive.
Assessments	
2.2.2 There is an assessment of the impact of the fishery on endangered, threatened or protected species.	Yes, the 2009 ERA considered the impact of fishing on threatened, endangered and protected species (TEPS). Given extremely limited interactions, risk rating was assessed as negligible.
2.2.3 There is an assessment of the impact of the fishery on threatened ecological communities.	Not applicable. Fishery does not overlap with any EPBC listed threatened ecological community (TEC).

Management responses	
2.2.4 There are measures in place to avoid capture and/or mortality of endangered, threatened or protected species.	Not required given extremely limited interactions to date.
2.2.5 There are measures in place to avoid impact on threatened ecological communities.	Not applicable.
2.2.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	Not applicable.
Objective 3 - The fishery is conducted, in a manner that minimises the impact of fishing operations on the ecosystem generally.	
Information requirements	
2.3.1 Information appropriate for the analysis in 2.3.2 is collated and/or collected covering the fisheries impact on the ecosystem and environment generally.	Yes, fishery dependent and fishery independent data collected annually.
Assessment	
2.3.2 Information is collected and a risk analysis, appropriate to the scale of the fishery and its potential impacts, is conducted into the susceptibility of each of the following ecosystem components to the fishery. <ol style="list-style-type: none"> Impacts on ecological communities <ul style="list-style-type: none"> Benthic communities Ecologically related, associated or dependent species Water column communities Impacts on food chains <ul style="list-style-type: none"> Structure Productivity/flows Impacts on the physical environment <ul style="list-style-type: none"> Physical habitat Water quality 	Yes, comprehensive ERA conducted in 2009, three ecosystem risks identified as moderate (accidental translocation of <i>Caulerpa</i> , greenhouse gas emissions and oil discharge from vessels).
Management responses	
2.3.3 Management actions are in place to ensure significant damage to ecosystems does not arise from the impacts described in 2.3.1.	Management responses to mitigate risks identified in management plan.
2.3.4 There are decision rules that trigger further management responses when monitoring detects impacts on selected ecosystem indicators beyond a predetermined level, or where action is indicated by application of the precautionary approach.	Yes, described in management plan.

2.3.5 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.

Appears likely.

SECTION 3: ASSESSMENT OF THE SOUTH AUSTRALIAN BLUE CRAB FISHERY AGAINST THE REQUIREMENTS OF THE EPBC ACT

Please Note – the table below is not a complete or exact representation of the EPBC Act. It is intended as a checklist of relevant sections and components of the EPBC Act to provide advice on the fishery in relation to decisions under Part 13 and Part 13A.

Part 12

	Comment
Section 176 Bioregional Plans	
(5) Minister must have regard to relevant bioregional plans	Not applicable. There is no fishing activity within areas covered by a bioregional plan.

Part 13

Not applicable. No Part 13 accreditation is required for this fishery.

Part 13A

Section 303BA Objects of Part 13A	
<p>(1) The objects of this Part are as follows:</p> <ul style="list-style-type: none"> (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. 	
	Comment
Section 303DC Minister may amend list (non CITES species)	
<p>(1) The Minister may amend the LENS by:</p> <ul style="list-style-type: none"> (a) doing any of the following: <ul style="list-style-type: none"> (i) including items in the list; (ii) deleting items from the list; (iii) imposing a condition or restriction to which the inclusion of a specimen in the list is subject; 	<p>The Department recommends that specimens that are or are derived from fish or invertebrates, taken in the South Australian Blue Crab Fishery as defined in the management regime in force under the South Australian <i>Fisheries Management Act 2007</i>, but not including</p> <ul style="list-style-type: none"> • specimens that belong to eligible listed threatened species, as defined under section 303BC of the EPBC Act, or

(iv) varying or revoking a condition or restriction to which the inclusion of a specimen in the list is subject	<ul style="list-style-type: none"> specimens that belong to taxa listed under section 303CA of the EPBC Act (Australia's CITES list) <p>be included in the list of exempt native specimens until 25 July 2025.</p>
(1A) In deciding to amend LENS, Minister must rely primarily on outcomes of Part 10, Div 1 Or 2 assessment	Not applicable. No assessment under Part 10 of the EPBC Act has been completed as the South Australian Blue Crab Fishery is not a Commonwealth fishery.
(1C) The above does not limit matters that may be considered when deciding to amend LENS.	<p>The Department considers that the amendment of the list of exempt native specimens to include product derived from the fishery would be consistent with the provisions of Part 13A (listed above) as:</p> <ul style="list-style-type: none"> the fishery will not harvest any Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) listed species there are management arrangements in place to ensure that the resource is being managed in an ecologically sustainable way (see links above) the operation of the fishery is unlikely to be unsustainable and threaten biodiversity within the next ten years.
<p>(3) Before amending LENS, Minister must consult:</p> <p>(a) other Minister or Ministers as appropriate; and</p> <p>(b) other Minister or Ministers of each State and self-governing Territory as appropriate; and</p> <p>(c) other persons and organisations as appropriate.</p>	General consultation with the (SA) Minister for Fisheries in October 2014 (MS14-002367).

Part 16

	Comment
Section 391 Minister must consider precautionary principle in making decisions	
<p>(1) Minister must take account of precautionary principle</p> <p>(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.</p>	Precautionary management measures in place. The precautionary principle has been considered by the Department when making its recommendation to the delegate to include specimens in the list of exempt native specimens.