



Australian Government

Department of the Environment and Energy

Assessment of the
**Commonwealth Bass Strait Central Zone Scallop
Fishery**

October 2016

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This report should be attributed as '*Assessment of the Commonwealth Bass Strait Central Zone Scallop Fishery October 2016*, Commonwealth of Australia 2016'.

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 COMMONWEALTH BASS STRAIT CENTRAL ZONE SCALLOP 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 Bass Strait Central Zone Scallop Fishery (BSCZSF) against the relevant requirements of the Guidelines and the EPBC Act.

Guidelines	Meets	Partially meets	Does not meet	Details
Management regime	9 of 9	0	0	Despite the challenges associated with managing a naturally fluctuating stock, the fishery is well managed with transparent arrangements.
Principle 1 (target stocks)	9 of 9	0	0	Scallops stocks are naturally variable and the current ABARES stock status assessment is 'uncertain'. However, the harvest strategy contains clear control rules capable of responding to fluctuations and constraining fishing effort if pre-season surveys show low abundance. Recent stocks (based on these surveys) appear strong and may reflect the improvements made to the harvest strategy.
Principle 2 (bycatch and TEPS)	7 of 8	1 of 8	0	Risks to bycatch and protected species are addressed through the ecological risk assessment and ecological risk management processes (including the Bycatch and Discard Workplan). There is generally low bycatch and no protected species interactions (other than two syngnathid species which were recorded in 2009 during a pre-season survey).
Principle 2 (ecosystem impacts)	4 of 5	1 of 5	0	Ecological risk assessments (ERAs) have been undertaken and an ecological risk management strategy is being implemented. These arrangements consider risks to species and habitats but not ecological communities. While the risks are thought to be low, future ERAs undertaken by AFMA should give greater consideration to the risks to ecological communities.
EPBC requirements				
Part 12	-	-	-	Not applicable. No Marine Bioregional Plan for the South-east Marine Region.
Part 13	11 of 11	0	0	Negligible interaction with protected species recorded to date, and none since 2009.
Part 13A	2 of 3	1 of 3 (S303DC(3))	0	Limited consultation if LENS is amended, although sufficient for strict requirements, as per advice to Minister (MS14-002367).

Part 16	1 of 1	0	0	Precautionary catch limits are determined annually.
<p>Conclusion: Scallop stocks have high natural variability and the fishery was classified as overfished at various times prior to 2008. However, recent changes to the harvest strategy have provided more flexibility to respond to natural fluctuations and stocks have presented strongly since that time.</p> <p>Risks to bycatch and protected species, as well as ecosystems to a lesser extent, have been assessed and mitigated through AFMA's ecological risk management processes, including the Bycatch and Discard Workplan for the fishery. These arrangements are expected to be updated in 2018.</p>				
<p>Final recommendation for 2016 assessment of BSCZSF: The fishery is considered low risk and is recommended for 10 year approval (2016 to 2026). The Department considers it important for AFMA to undertake its planned update of the ecological risk assessments (ERAs) in 2018 and for that process to include consideration of species, habitats and ecological communities.</p>				

Notes:**Assessment history:**

- 1st assessment finalised 2002 – WTO, reviewed in 2004 – WTO, with 3 conditions and 6 recommendations
- Reviewed in 2006, for scientific surveys only, no commercial catch – WTO with 4 conditions
- 2nd assessment finalised 2009 – WTO with 5 conditions
- 3rd assessment finalised 2013 – LENS with 5 recommendations, Part 13 open ended (no public comments received)
- Most recent assessment report (April 2013):
<http://www.environment.gov.au/marine/fisheries/commonwealth/bass-strait>.
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Key links:

Protected species interactions – publicly available via the AFMA website:

<http://www.afma.gov.au/sustainability-environment/protected-species-management/protected-species-interaction-reports/>

Annual reports (recommendation. 3): Reports provided to the department.

AFMA annual (corporate) reports, which include a summary of fishery performance:

<http://www.afma.gov.au/about/corporate-publications/>

Protected species interactions: Syngnathids are the only protected taxa that have been recorded; however there have been no reported interactions, at least since January 2012 (based on available records). Interactions for all AFMA fisheries are publicly reported at <http://www.afma.gov.au/sustainability-environment/protected-species-management/protected-species-interaction-reports/>

Fishery information available on AFMA website: <http://www.afma.gov.au/fisheries/bass-strait-central-zone-scallop-fishery/>

Management arrangements booklet 2015: <http://www.afma.gov.au/wp-content/uploads/2014/08/BSCZSF-Management-Arrangements-2015-Final.pdf>

[Bass Strait Central Zone Scallop Fishery Harvest Strategy June 2015](#)

Ecological Risk Assessment (ERA) and Ecological Risk Management (ERM)

- [Ecological Risk Assessment for Effects of Fishing Report for the Bass Strait Central Zone Scallop Sub-Fishery](#)
- [Residual Risk Assessment for the Bass Strait Central Zone Scallop Fishery](#)
- [Ecological Risk Management Report for the Bass Strait Central Zone Scallop Fishery](#)
- [Bass Strait Central Zone Scallop Fishery Bycatch and Discarding Workplan 1 May 2015 to 31 March 2017](#)

[ABARES Fishery Status Reports 2015](#). Commercial scallop stock status uncertain; based on limited evidence of successful recent recruitment in eastern Bass Strait, catches and fishing area generally declining and no robust estimate of total biomass.

Subsequent stock surveys (2015 and 2016) have showed strong stock levels, supporting the highest TACs for commercial scallops since 2010. <http://www.afma.gov.au/wp-content/uploads/2016/01/BSCZSF-2015-Survey-Final-Report.pdf>

(AFMA to provide link to 2016 survey when available)

Pitcher, C.R., Ellis, N., Althaus, F., Williams, A., McLeod, I., Bustamante, R., Kenyon, R., Fuller, M. (2016) [Implications of current spatial management measures for AFMA ERAs for habitats — FRDC Project No 2014/204](#). CSIRO Oceans & Atmosphere.

[FRDC Status of Key Australian Fish Stocks 2014](#). Commercial scallop stock status undefined.

SECTION 2: DETAILED ANALYSIS OF THE COMMONWEALTH BASS STRAIT CENTRAL ZONE SCALLOP 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	Management plan, harvest strategy and management arrangements all available online
Be developed through a consultative process providing opportunity to all interested and affected parties, including the general public	Management plans and arrangements are developed and maintained through a range of consultative processes, including ScallopMAC, ScallopRAG and public consultation. Minutes of ScallopMAC and ScallopRAG meetings are published on the AFMA website.
Ensure that a range of expertise and community interests are involved in individual fishery management committees and during the stock assessment process	A range of expertise and stakeholders are involved through ScallopMAC and ScallopRAG.
Be strategic, containing objectives and performance criteria by which the effectiveness of the management arrangements are measured	The harvest strategy for the fishery is consistent with the Commonwealth Fisheries Harvest Strategy Policy and contains appropriate objectives and performance criteria.
Be capable of controlling the level of harvest in the fishery using input and/or output controls	Arrangements are capable of controlling the level of harvest in the fishery using input and output controls. Limited licences, and harvest strategy which prescribes spatial, seasonal, size and total catch limits. Additional voluntary spatial management based on scallop discard rates specified in Harvest Strategy and managed through the BSCZSF Industry Management Committee.
Contain the means of enforcing critical aspects of the management arrangements	Sufficient means exist to enforce critical aspects of the management arrangements. AFMA applies a risk based compliance program and monitors compliance using VMS, logbook and catch disposal records, observer coverage as well as other activities where necessary. These arrangements are considered appropriate.
Provide for the periodic review of the performance of the fishery management arrangements and the management strategies, objectives and criteria	Performance is reviewed at least annually, as part of the total allowable catch setting process, and reported through AFMA's annual corporate reports.

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	<p>Ecological risks are assessed and managed in accordance with AFMA's Ecological Risk Management framework.</p> <p>This is supported by fishery specific tools such as the Bass Strait Central Zone Scallop Fishery Bycatch and Discarding Workplan 1 May 2015 to 31 March 2017.</p>
Requires compliance with relevant threat abatement plans, recovery plans, the National Policy on Fisheries Bycatch, and bycatch action strategies developed under the policy	The fishery is compliant with all relevant 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.	<p>There is a reliable information collection system in place appropriate to the scale of the fishery.</p> <p>There is regular fishing activity and mandatory reporting via AFMA approved daily fishing logbooks and catch disposal records. Boats are also required to operate vessel monitoring systems (VMS) at all times.</p> <p>Scientific observers are carried during pre-season surveys and provide an independent source of data to meet the needs of the fishery. Data from pre-season surveys and VMS is reviewed by ScallopMAC and ScallopRAG each year.</p> <p>Observer coverage outside the pre-season surveys occurs sporadically depending on data needs.</p>
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.	<p>Stock assessments are sufficient for the nature of the fishery.</p> <p>Stocks are surveyed prior to each fishing season in accordance with the harvest strategy for the fishery.</p> <p>While the surveys do not assess the stock as a whole, they do consider abundance, density, size and reproductive capacity. This supports the harvest strategy to conserve a viable breeding population and support sustainable fishing.</p>
1.1.3 The distribution and spatial structure of the stock(s) has been established and factored into management responses.	<p>The pre-season surveys target areas of likely scallop abundance. Consequently, they do not provide information on the stock as a whole. They do however support the harvest strategy to conserve a viable spawning population and manage fishing in a sustainable way.</p>

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.	There are reliable estimates of all removals. These estimates are factored into stock assessments and target species catch levels. Available information on removals from adjacent state managed fisheries is considered by ScallopMAC and ScallopRAG when recommending total allowable catch limits. However, it is unclear how much these fisheries contribute to the spawning biomass in the Commonwealth fishery. There have been no reported catches of scallops by other Commonwealth fisheries in the area of the fishery AFMA logbook records 2002-2014).
1.1.5 There is a sound estimate of the potential productivity of the fished stock(s) and the proportion that could be harvested.	Estimates of productivity are considered in annual stock assessments and during determination of total allowable catches.
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.	The variable nature of the stock means the harvest strategy cannot easily incorporate maximum sustainable or maximum economic yield reference points. The harvest strategy also does not require an assessment to be made of the whole stock, but uses robust surveys to support conservation of viable stocks for ongoing recruitment. This approach is consistent with the intent of the Commonwealth Fisheries Harvest Strategy Policy. Management Strategy Evaluation (MSE) testing was undertaken on the previous (2011) harvest strategy and the results were used to inform development of the current harvest strategy. This included a proxy (taking into account dredge efficiency) for the limit reference point, requiring one scallop bed of at least 1500 tonnes exploitable biomass to be retained in all years.
1.1.7 There are management strategies in place capable of controlling the level of take.	Total allowable catch limits are determined annually.
1.1.8 Fishing is conducted in a manner that does not threaten stocks of byproduct species.	Take of byproduct is low and impact on byproduct species has been considered in AFMA's ecological risk assessments and management strategies.
(Guidelines 1.1.1 to 1.1.7 should be applied to byproduct 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.	Harvest strategy is precautionary, and decisions based on pre-season survey data.
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.	Not applicable. Harvest strategy is predicated on precautionary TACs and accounts for natural stock fluctuations.
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.	Not applicable. Stock is not currently below limit, but is considered uncertain due to natural fluctuation. Control rules in harvest strategy appear adequate.
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.	<p>There is an appropriate information collection system in place appropriate to the scale of the fishery; however some uncertainty remains about the reliability of bycatch reporting.</p> <p>The primary source of data on bycatch in the scallop fishery is obtained through the pre-season biomass survey.</p> <p>Daily fishing logbooks require bycatch to be recorded but there is not currently any routine observer coverage outside the pre-season surveys to validate fishery-dependent data.</p> <p>AFMA's Bycatch and Discarding Workplan commits to monitor logbook, observer and catch disposal data to identify gaps and inconsistencies in reporting.</p> <p>Four species have been identified through the ERA process as being at high risk from the effects of scallop dredging. The pre-season survey results for 2015 and 2016 show negligible quantities of these species are caught. Despite efforts by AFMA to aid fishers' identification and reporting of these species, they have not been recorded in logbook records to date.</p> <p>AFMA's Bycatch and Discarding Workplan also requires ScallopRAG to consider bycatch and discard data requirements and develop a monitoring program for the fishery. This was completed in 2015 and relies primarily on scientific observer trips.</p> <p>AFMA reviewed observer records of bycatch composition from 2008 to 2010 and compared these to more recent data recorded on pre-season surveys. AFMA found that bycatch compositions have remained consistent, with no significant catches of high risk species.</p>

Assessments	
2.1.2 There is a risk analysis of the bycatch with respect to its vulnerability to fishing.	<p>Risks to bycatch species are assessed and managed through AFMA's ecological risk management (ERM) framework.</p> <p>A fishery specific Bycatch and Discard Workplan is also in place for the fishery.</p> <p>ERAs were undertaken in 2007 and 2009, and risks are managed in accordance with the ERM strategy (2009).</p> <p>AFMA has committed to review assessments and strategies every five years, with the next assessment expected to be completed during 2018.</p> <p>Four species of invertebrates are classed as high risk in the ERA (King Island thickshell clam, southern blueringed octopus, large pebble crab and black and white seastar). These species are presently high risk due to uncertainty in their biological information, but fishing impact is thought to be low.</p> <p>The primary monitoring of these species is undertaken by scientific observers during pre-season surveys.</p> <p>During the 2016 survey, the catch of high risk species as a percentage of total catch was very low (less than four per cent for King Island thickshell clam and one per cent or less for the other three species).</p>
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.	<p>The fishery typically targets areas of naturally high disturbance, with high scallop density and low species diversity; this has the effect of minimising bycatch.</p> <p>Incidental protection is afforded by the harvest strategy, which although focused on target species, includes spatial and seasonal closures, surveys to define productive fishing areas (which have inherently low bycatch) and monitoring of logbook, observer (where available) and survey data. The resulting area fished each season is relatively small (approximately 22 square kilometres, Pitcher et. al. 2016) further limiting potential interactions with benthic species.</p> <p>These measures are considered adequate at this time.</p>
2.1.4 An indicator group of bycatch species is monitored.	<p>Not applicable.</p> <p>Information from logbooks, observer coverage and pre-season surveys is used to inform AFMA's ecological risk assessments. These assessments have not identified any specific indicator groups of bycatch species but do focus attention on species considered to be at high risk from the effects of fishing.</p>

2.1.5 There are decision rules that trigger additional management measures when there are significant perturbations in the indicator species numbers.	Not applicable. Refer to item 2.1.4.
2.1.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	There is a high chance of achieving the objective given the ecological risk assessment and ecological risk management arrangements in place.
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.	There is a reliable information collection system in place appropriate to the scale of the fishery. Interactions with protected species are required to be reported through AFMA approved logbooks. Additional data is also collected by scientific observers during pre-season surveys. There have been no protected species interactions reported in logbooks or by observers, since 2009 when two syngnathid species were caught in a pre-season survey. AFMA's Bycatch and Discarding Workplan commits to actions, including monitoring logbook, catch disposal and any observer data to identify any gaps and inconsistencies in reporting.
Assessments	
2.2.2 There is an assessment of the impact of the fishery on endangered, threatened or protected species.	Ecological risk assessments have been completed and no protected species were found to be at high risk. An ecological risk management strategy is also in place. The ERA methodology has recently been revised and is being tested in two Commonwealth fisheries during 2016. Once testing is complete, other fisheries will be updated. AFMA has committed to review assessments and strategies every five years, with the next assessment expected to be completed during 2018.
2.2.3 There is an assessment of the impact of the fishery on threatened ecological communities.	Not applicable. While the fishery includes areas of the <i>Giant Kelp Marine Forests of South East Australia ecological community</i> (EC), fishing does not currently occur over these areas. These forests occur over different substrate (rocky reef) than the scallop fishery typically targets. This is supported by the scientific surveys which have not recorded the presence of any giant kelp. The EC was listed in 2012 and was therefore not considered in the 2007 or 2009 ERAs. These ERAs are due to be reviewed in 2018, at which time the EC is expected to be formally considered.

Management responses	
2.2.4 There are measures in place to avoid capture and/or mortality of endangered, threatened or protected species.	<p>Measures to avoid capture and/or mortality of endangered, threatened or protected species are considered adequate.</p> <p>An ecological risk management strategy and Bycatch and Discarding Workplan are in place for the fishery. The workplan includes a monitoring program comprising logbook reporting, observer coverage (where necessary) and annual fishery surveys, to detect and respond to potential risks to protected species.</p> <p>No interactions have been recorded since 2009.</p> <p>Risks to cetaceans, seals, seabirds and sharks are likely to be minimal given the slow movement of the fishing gear which provides them opportunity to avoid capture (Wallis and Stump, 2013, Appendix 2F).</p> <p>The ecological risk assessments are scheduled to be updated in the scallop fishery in 2018 and bycatch and discard workplans will then be revised accordingly.</p>
2.2.5 There are measures in place to avoid impact on threatened ecological communities.	<p>Not applicable.</p> <p>No fishing occurs over threatened ecological communities.</p>
2.2.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	High chance of achieving the objective given recent performance.
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.	<p>While some data is collected which aids ecological risk assessment (ERA), the data requirements, especially for assessing communities, are not defined and collection is not designed for this objective.</p> <p>Pre-season surveys collect a wide variety of information, but are designed to survey scallop size and abundance in particular areas. They are also typically undertaken in areas where fishing or surveys have previously been undertaken.</p> <p>Logbooks also record information on the range of depths fished, the substrate (mud, sand, shale or stony) and bycatch species.</p> <p>It is expected that the revised ERA (expected 2018) and associated risk management arrangements will better ensure all necessary data is collected and risks managed accordingly.</p>
Assessment	

<p>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.</p> <ol style="list-style-type: none"> 1. Impacts on ecological communities <ul style="list-style-type: none"> • Benthic communities • Ecologically related, associated or dependent species • Water column communities 2. Impacts on food chains <ul style="list-style-type: none"> • Structure • Productivity/flows 3. Impacts on the physical environment <ul style="list-style-type: none"> • Physical habitat • Water quality 	<p>An ecological risk assessment (ERA) was undertaken in 2007 which considered species and habitats, but not communities. It recommended that communities be considered when methods for their assessment become available.</p> <p>No habitats were found to be at high risk from the effects of fishing, but the ERA noted that vulnerable habitat types do occur on the inner shelf where scallop fishing occurs.</p> <p>It considered that risk management arrangements for the fishery were effective, particularly the restricted (and rotating) areas fished, and noting these areas were typically unstructured, high energy (current swept) sediment plains.</p> <p>The 2007 ERA recommended a review of risk ratings for these inner shelf habitats that support large, erect or delicate epifauna, if new information shows either a change or expansion in the distribution of fishing effort in this fishery or others that use the same habitats, or if these habitats were revealed to be important in ways unrecognised at the time of the assessment.</p> <p>AFMA will update the ERAs for the fishery, including the habitat component in 2018.</p> <p>An ecological risk management strategy is in place for all components identified to be at high risk in the fishery (four species). Information on the interaction with these species continues to be collected through scientific observers on the pre-season surveys.</p> <p>Recent work by Pitcher et al. (2016) estimated the annual footprint of the fishery to be approximately 22 square kilometres; with the most exposed assemblage ('seabed with tidal current stress') having a fishing footprint of less than one per cent of the fishery. These estimates, compared with other demersal fisheries, were among the lowest relative potential for habitat risk. The authors noted however that this relative risk does not necessarily imply actual risk to habitats.</p>
<p>Management responses</p>	
<p>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.</p>	<p>The fishery is unlikely to have a significant impact due to the relatively small area fished (0.03 per cent of the fishery fished each year, Pitcher et al 2016) and the areas targeted.</p> <p>Fishing occurs in areas of high natural disturbance (current swept sediment plains) and in areas where there is high scallop density. These areas typically have low species diversity.</p> <p>The harvest strategy limits, and where necessary, prevents fishing if scallop size and abundance is too low (based on annual pre-season surveys). Scallop beds may also be closed during the season on a voluntary basis to</p>

	<p>protect undersized scallops. These closures not only protect scallops but also the ecosystems in which they live. These measures are also likely to be more effective than measures that regulate gear design, as items not retained by the gear may still be damaged.</p> <p>Recent research by Pitcher et al. (2016) suggests the impact of Commonwealth scallop dredging has a very low impact on benthic assemblages in the Bass Strait.</p>
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.	<p>Noting the arrangements detailed in item 2.3.3, risks are considered to be effectively managed without need for additional monitoring or management triggers.</p> <p>AFMA is updating its ecological risk assessments and management strategies for this fishery in 2018, at which time risks to species, habitats as well as communities will be reviewed and management updated accordingly.</p>
2.3.5 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	<p>High chance of achieving the objective given the management arrangements in place.</p>

SECTION 3: ASSESSMENT OF THE COMMONWEALTH BASS STRAIT CENTRAL ZONE SCALLOP 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 13

	Comment
Accreditable plan, regime or policy (Division 1, Division 2, Division 3, Division 4)	
s. 208A (1) (a-e) , s.222A (1) (a-e), s.245A (1) (a-e), s.265 (1) (a-e) Does the fishery have an accreditable plan of management, regime or policy?	Yes. Bass Strait Central Zone Scallop Fishery Management Plan 2002, in force under <i>Fisheries Management Act 1991</i> .
Division 1 Listed threatened species, Section 208A Minister may accredit plans or regimes	
(f) Will the plan, regime or policy require fishers 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?	Yes. The management arrangements require fishers to take all reasonable steps to ensure that members of listed threatened species are not killed or injured as a result of the fishing.
(g) And, is the fishery likely to adversely affect the survival or recovery in nature of the species.	No. The fishery is not likely to adversely affect the survival or recovery in nature of listed threatened species. No recorded interactions with listed threatened species.
Division 2 Migratory species, Section 222A Minister may accredit plans or regimes	
(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that members of listed migratory species are not killed or injured as a result of the fishing?	Yes. The management arrangements require fishers to take all reasonable steps to ensure that members of listed migratory species are not killed or injured as a result of the fishing.
(g) And, is the fishery likely to adversely affect the conservation status of a listed migratory species or a population of that species?	No. The fishery is not likely to adversely affect the conservation status of a listed migratory species or a population of that species. No recorded interactions with listed migratory species.
Division 3 Whales and other cetaceans, Section 245 Minister may accredit plans or regimes	
(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that cetaceans are not killed or injured as a result of the fishing?	Yes. The management arrangements require fishers to take all reasonable steps to ensure that cetaceans are not killed or injured as a result of the fishing.
(g) And is the fishery likely to adversely affect the conservation status of a species of cetacean or a population of that species?	No. The fishery is unlikely to adversely affect the conservation status of a species

	of cetacean or a population of that species. No recorded interactions with cetaceans.
Division 4 Listed marine species, Section 265 Minister may accredit plans or regimes	
(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that members of listed marine species are not killed or injured as a result of the fishing?	Yes. The management arrangements require fishers to take all reasonable steps to ensure that members of listed marine species are not killed or injured as a result of the fishing.
(g) And is the fishery likely to adversely affect the conservation status of a listed marine species or a population of that species?	No. The fishery is unlikely to adversely affect the conservation status of a listed marine species or a population of that species. No listed marine species interactions recorded since 2009 when two syngnathid species were caught during a pre-season survey.
Section 303AA Conditions relating to accreditation of plans, regimes and policies	
(1) This section applies to an accreditation of a plan, regime or policy under section 208A, 222A, 245 or 265.	Accreditation is recommended. No interactions recorded since 2009 and negligible at that time.
(2) The Minister may accredit a plan, regime or policy under that section even though he or she considers that the plan, regime or policy should be accredited only: (a) during a particular period; or (b) while certain circumstances exist; or (c) while a certain condition is complied with. In such a case, the instrument of accreditation is to specify the period, circumstances or condition.	No conditions required.
(7) The Minister must, in writing, revoke an accreditation if he or she is satisfied that a condition of the accreditation has been contravened.	Not applicable.

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)	
(1) The Minister may amend the LENS by: (a) doing any of the following: (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; (iv) varying or revoking a condition or restriction to which the inclusion of a specimen in the list is subject	
(1A) In deciding to amend LENS, Minister must rely primarily on outcomes of Part 10, Div 1 or 2 assessment	Assessed under Part 10 in 2005, reconsidered in 2010 after management plan amendment. Fishery impacts on the environment in Commonwealth marine area not found to be unacceptable or unsustainable.
(1C) The above does not limit matters that may be considered when deciding to amend LENS.	Fishery is managed consistent with the Objects of Part 13A.
(3) Before amending LENS, Minister must consult: (a) other Minister or Ministers as appropriate; and (b) other Minister or Ministers of each State and self-governing Territory as appropriate; and (c) other persons and organisations as appropriate.	General consultation with Commonwealth Fisheries Minister in October 2014 (MS14-002367).

Part 12

	Comment
Section 176 Bioregional Plans	
(5) Minister must have regard to relevant bioregional plans	Not applicable. No Marine Bioregional Plan for the South-east Marine Region.

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>	The precautionary principle has been considered by the Department when making its recommendation to include specimens in the list of exempt native specimens.