



Australian Government

Australian Fisheries Management Authority



# BASS STRAIT CENTRAL ZONE SCALLOP FISHERY



## BYCATCH AND DISCARDING WORKPLAN



1 MAY 2015 TO 31 MARCH 2017

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 Protecting **our** fishing future

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# BASS STRAIT CENTRAL ZONE SCALLOP FISHERY BYCATCH AND DISCARDING WORKPLAN

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## Introduction

In carrying out its functions, the Australian Fisheries Management Authority (AFMA) must pursue objectives in the *Fisheries Management Act 1991* including having regard to the impact of fishing activities on non-target species and the long term sustainability of the marine environment.

The *Bass Strait Central Zone Scallop Fishery Management Plan 2002* requires AFMA to implement a bycatch action plan (now referred to as a Bycatch and Discarding Workplan) to ensure that the incidental catch of scallops and the incidental catch of other species are minimised. The Bass Strait Central Zone Scallop Fishery (BSCZSF) has had two previous workplans: the *BSCZSF Bycatch and Discarding Workplan 1 June 2009 to 31 May 2011* and the *BSCZSF Bycatch and Discarding Workplan 1 May 2012 to 31 April 2014*. This Bycatch and Discarding Workplan incorporates findings from the review of the 2012 to 2014 workplan and the results of the Ecological Risk Assessment (ERA) process completed in 2009.

The aims of this Bycatch and Discarding Workplan are to:

- respond to high ecological risks assessed through AFMA's ERA processes and management response completed in 2009 and other assessment processes
- avoid interactions with species listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
- minimise overall bycatch in the fishery over the long-term.

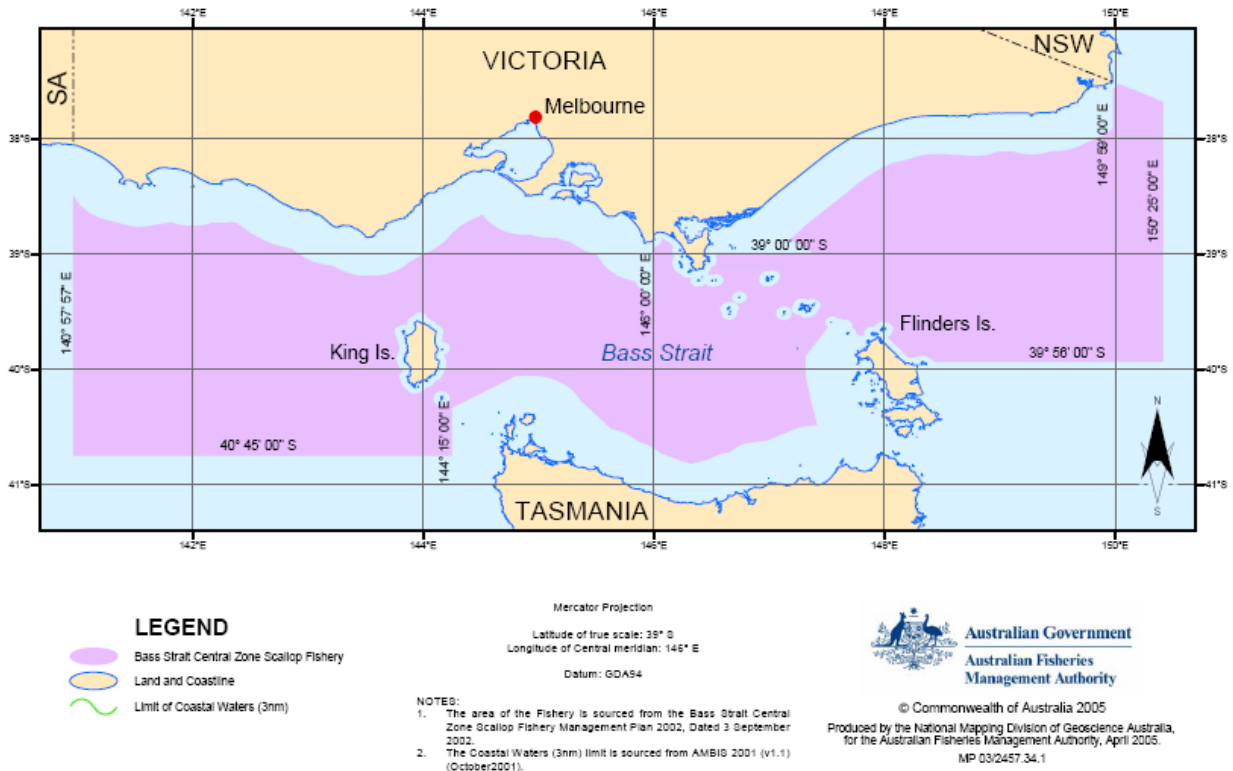
This Bycatch and Discarding Workplan should be read in conjunction with the:

- *Commonwealth Policy on Fisheries Bycatch 2000*
- *AFMA's program for addressing bycatch and discarding in Commonwealth fisheries: an implementation strategy* (AFMA 2008)
- *Bass Strait Central Zone Scallop Fishery Management Plan 2002*
- *Ecological Risk Management Report for the Bass Strait Central Zone Scallop Fishery* (AFMA 2009)
- *Harvest Strategy for the Bass Strait Central Zone Scallop Fishery*.

## Fishery description

Commercial scallop fishing in Bass Strait commenced in the early 1970s and is managed under three jurisdictions. AFMA manages the BSCZSF, and Victoria and Tasmania manage zones generally out to 20 nm off their respective coastlines under Offshore Constitutional Settlement agreements (Figure 1). The target species of the BSCZSF is the Commercial Scallop (*Pecten fumatus*). Concession holders are also able to target Doughboy Scallops (*Chlamys asperrimus*), a

species common throughout the Bass Strait, which is rarely retained as markets do not currently exist.



**Figure 1** Area of the Bass Strait Central Zone Scallop Fishery (Geoscience Australia, 2005)

## Characterisation of bycatch and discarding

This Bycatch and Discarding Workplan focuses on discards of, or damaging interactions with fishing gear of:

- juvenile or damaged Commercial Scallops, a quota species
- Doughboy Scallops, a quota species
- other non-quota species assessed as high risk species for the BSCZSF (see below).

Bycatch in the BSCZSF has been low primarily because of the targeted nature of fishing. The areas fished are regions where scallops are abundant, and generally exhibit low species diversity (almost exclusively Commercial Scallops) and low bycatch abundance (Haddon et al. 2006).

Discarding of Commercial Scallops occurs only when scallops are undersized. Catches of juvenile scallops are low because:

- smaller scallops can pass through the teeth of scallop dredges
- the Harvest Strategy works to prevent fishing in areas where there are high concentrations of juveniles. The Harvest Strategy directs the industry co-management committee to voluntarily close scallop beds that do not meet the discard rate of less than 20 per cent of scallops less than 85mm in length.

***Ecological Risk Management: high risk and threatened, endangered and protected (TEP) species***

In November 2009, AFMA released the *Ecological Risk Management: Report for the Bass Strait Central Zone Scallop Fishery* (ERM) (AFMA 2009). The report describes the ERA process for the BSCZSF and provides a priority list comprised of four species which were scored at high risk due to lack of information (Table 1). There have been no reported interactions with the four high risk species in Table 1 since the first Bycatch and Discarding Workplan was implemented in 2009. The next level of environmental assessment process, a rapid quantitative risk assessment, which may result in a lower risk classification for these four species, has not been conducted.

This Bycatch and Discarding Workplan does not propose further assessment of these species but focuses on improved monitoring and reporting. The initial ERA stage involves the development of a qualitative ERA for each individual fishery. AFMA and the CSIRO are currently reviewing the ERA methodology and ERM framework. This will result in a revised ERA methodology to enable AFMA to report on and monitor the environmental performance of its fisheries against its targets and objectives for environmental management. This may impact the risk ratings of the four species scored at high risk.

Following the assessment of the BSCZSF under the EPBC Act in April 2013, the Department of the Environment recommended that AFMA develop materials to enable crew to identify species classified as high risk so that catch information can be collected. This was an action item in the previous Bycatch and Discarding Workplan for the fishery and a poster was developed by AFMA and the Institute for Marine and Antarctic Studies (IMAS) that included information on how to identify the four high risk species. BSCZSF concession holders received the poster in October 2013, as well as a letter which requested users to report the estimated numbers and/or kg weight of the priority species in logbooks. No high risk species have been reported since the poster was distributed.

No threatened, endangered or protected (TEP) species were identified by the ERM as high risk in the BSCZSF. The ERM did identify 132 TEP species that were thought to occur within the waters of the fishery, however none of these species were assessed as being at high ecological risk. No interactions with TEP species or high risk species have been reported in the BSCZSF since the first Bycatch and Discarding Workplan was implemented in 2009, which continues the historically low levels of reported interactions. The only recorded interactions with TEP species in the BSCZSF have been with two species during fishery surveys, the common weedfish (*Heteroclinus perspicillatus*) and the southern potbellied seahorse (*Hippocampus abdominalis*).

**Table 1.** Priority list of high risk species to be addressed in the BSCZSF.

<b>Taxonomic Group</b>	<b>Scientific Name</b>	<b>Common Name</b>	<b>Role in Fishery</b>	<b>Highest Level of Assessment</b>	<b>Risk Score</b>
Invertebrate	<i>Eucrassatella kingicola</i>	Crassatella	Discard	Level 2 PSA Residual Risk Assessment	High
Invertebrate	<i>Hapalochlaena maculosa</i>	Southern blue ringed octopus	Discard	Level 2 PSA Residual Risk Assessment	High
Invertebrate	<i>Bellidilia undecimspinosa</i>	Pebble crab	Discard	Level 2 PSA Residual Risk Assessment	High
Invertebrate	<i>Luidia australiae</i>	Black and white seastar	Discard	Level 2 PSA Residual Risk Assessment	High

## **Monitoring program**

The monitoring program for the BSCZSF includes information collected through logbooks, catch disposal records, scientific surveys, observer coverage and independent research. An overview of the monitoring program is provided below.

### ***Logbooks and Catch Disposal Records***

All concession holders in the BSCZSF are required to complete the SCA01A logbook. This logbook provides for the recording of information on the vessel, operator, gear, location, time and catch for each fishing operation. Information on bycatch species, interactions with TEP species and other trip observations including bottom type, scallop size and discard rates are also collected. Accurate data from logbooks will allow continued monitoring of bycatch and discards in the fishery and assist in identifying any emerging issues. Additional information on the landed commercial catch in the fishery is collected through the SCQ02 Catch Disposal Record which also provides a means to verify information recorded in the SCA01A logbook. The review of the 2012 to 2014 Bycatch and Discarding Workplan identified a need to improve the bycatch reporting in logbooks.

### ***Observer Program***

Concession holders are required to carry an observer if requested by AFMA.

### ***Fishery Surveys***

Since 2000, AFMA, in conjunction with IMAS (previously the Tasmanian Aquaculture and Fisheries Institute), has undertaken industry based surveys of the BSCZSF. Fishery surveys from 2001 to 2004 indicate that the dominant bycatch species are molluscs, crustaceans, sponges and ascidians. Recent surveys are designed to monitor the condition of known beds by assessing the size structures, density, condition and distribution of the commercial scallop stock. In June 2014, IMAS finished a three year survey and stock assessment project. The project involved both assessing the fishery and determining biomass estimates for commercial scallops in areas of the fishery.

Under the new Harvest Strategy for the BSCZSF, implemented at the commencement of the 2014 season, the TAC of 150 tonnes set at the start of the season can only be increased if an independent research survey identifies a maximum of two scallop beds containing a biomass estimate of at least 1500 tonnes. The bed/s are then closed to fishing for the season with fishing permitted throughout the remaining area of the fishery. These independent research surveys will be carried out as required.

## 2015-2017 Bycatch and Discarding Workplan

<b>Actions</b>	<b>Risk / Issue to be addressed</b>	<b>Timeframe</b>	<b>Costs \$</b>	<b>Performance Indicators</b>	<b>Milestones</b>
Undertake a process to review the ERA methodology in relation to the high risk species	Appropriateness of the high risk species as determined from the ERA	TBC (it is unclear when the review of the ERA methodology will be complete)	Staff time (includes AFMA and ScallopRAG)	Review completed Results of the review considered for the BSCZSF	AFMA and CSIRO to complete the review of ERA methodology ScallopRAG and ScallopMAC to consider the results of the review and recommend management responses
Monitor logbook data, observer data and catch disposal records to identify gaps in reporting	Inconsistency with data collection Bycatch and discards data gaps	Annually 2015-17	AFMA staff time	Quality of reporting assessed	AFMA to compare logbook data, observer data and catch disposal records annually ScallopRAG and ScallopMAC to consider the results of the comparison and recommend management responses AFMA to consult with operators regarding accurate recording in logbooks
Monitor interactions with high risk and TEP species	Information on the level of interaction and impact on TEP species and high risk species identified in the ERA process	Annually 2015-17	AFMA staff time	ScallopRAG to annually consider interactions with high risk and TEP species	AFMA to annually review logbook data and observer reports for TEP interactions AFMA to report the results of the review to ScallopRAG
Consider observer coverage in the BSCZSF	General bycatch and discarding information Determine fishery data needs and ensure cost effective collection of data	Monitoring program developed and implemented in 2017 fishing season	Staff time (includes AFMA and ScallopRAG)	ScallopRAG to identify fishery data needs Development of monitoring plan ScallopRAG and ScallopMAC to consider and recommend appropriate observer coverage	ScallopRAG to consider and recommend appropriate observer coverage for the fishery and develop a monitoring program

## Summary

Where possible, this Bycatch and Discarding Workplan describes action items which are aimed at reducing the impact to species from fishing activities, and to cost effectively collect bycatch and discard data for the BSCZSF. Some action items are designed to collect the information needed to improve data, rather than reducing the fishing impact to a species.

The categorisation of the four high risk species is precautionary due to a lack of data. It is important that the Bycatch and Discarding Workplan address not only species that have been identified via the ERA process as being at high risk, but also general bycatch reduction methods. AFMA and industry will continue to work co-operatively to reduce bycatch, minimise discarding and improve monitoring within the BSCZSF.

## Review and reporting Process

The Bycatch and Discard Workplan will be reviewed at:

- 12 months to ensure actions are progressing and to determine if additional actions can be taken.
- 18 months to monitor the progress of action items.
- 24 months to assess the overall effectiveness of the workplan actions in addressing the associated bycatch risks and discard reduction.

At the end of the two years a new workplan will be developed and implemented in the BSCZSF.

## References

AFMA, 2008. AFMA's program for addressing bycatch and discarding in Commonwealth fisheries: an implementation strategy. 9p.

AFMA, 2009. Ecological Risk Management, Bass Strait Central Zone Scallop Fishery. 18p.

AFMA, 2012. Bass Strait Central Zone Scallop Fishery, Review of the Bycatch and Discarding Work Plan, 1<sup>st</sup> June, 2009 to 31<sup>st</sup> May, 2011. 8p.

Haddon, M., Harrington, J.J. and Semmens, J.M., 2006. *Juvenile Scallop Discard Rates and Bed Dynamics: Testing the Management Rules for Scallops in Bass Strait*. Tasmanian Aquaculture and Fisheries Institute, Taroona, Tasmania.