



Australian Government

Australian Fisheries Management Authority

2006

**BASS STRAIT CENTRAL ZONE SCALLOP
FISHERY**

DATA SUMMARY

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DATA SUMMARY

2006

*The data used in this Data Summary have been provided by catch and effort logbooks.
The data have not been verified by any other data source.*

AFMA FISHERIES SECTION

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Bass Strait Central Zone Scallop Fishery*

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Bass Strait Central Zone Scallop Fishery

DATA SUMMARY 2006

Preface

Scope of the Report

This Data Summary provides a broad outline of the catch and effort for the Bass Strait Central Zone Scallop Fishery (BSCZSF) and is an important mechanism for providing feedback to stakeholders on the logbook data sent to AFMA. In addition, the extraction and analysis of the data by the Logbook Program helps to identify data quality issues and provides valuable information on how data can be collected and managed better. As the TAC for 2006 was zero, this Data Summary can provide little in the way of new information for 2006. Instead, this summary compares data from past years, and explores trends in the fishery.

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EXECUTIVE SUMMARY

The Bass Strait Central Zone Scallop Fishery had a total allowable catch (TAC) set at zero for 2006 as the result of the 2005 Ministerial Direction. The status of the fishery is being reviewed and surveys are planned for 2007. AFMA aims for the fishing to resume in some areas if scientific evidence continues to show increases in the extent and maturity of the beds. As a result of the zero TAC there is little new information to add for 2006, and this Summary largely examines trends in previous years.

INTRODUCTION

Table 1. Summary table for BSCZSF.

Principal Species:	Commercial scallops (<i>Pecten fumatus</i>)
By Product Species:	Doughboy scallop (<i>Chlamys asperrimus</i>)
No. of Concessions:	152
Estimated Value for 2005/2006	\$0.191 million (Zero TAC set from May 1, 2006)
Main Markets:	Domestic and Europe
Fishing Techniques:	Harvested over sandy bottoms using a towed dredge
Stock Status:	Overfished
Management Method:	Input controls: seasonal closure, area closures, and minimum size limits Output controls: TAC and individual transferable quota (ITQ)

Description of the Bass Strait Central Zone Scallop Fishery

Area of Fishery

The Scallop Fishery in Bass Strait is divided into three zones, of which the Commonwealth manages the Central Zone (Fig. 1). The remaining zones, which are located generally 20 nautical miles off the coasts of Victoria and Tasmania, are managed by those States respectively under Offshore Constitutional Settlement agreements.

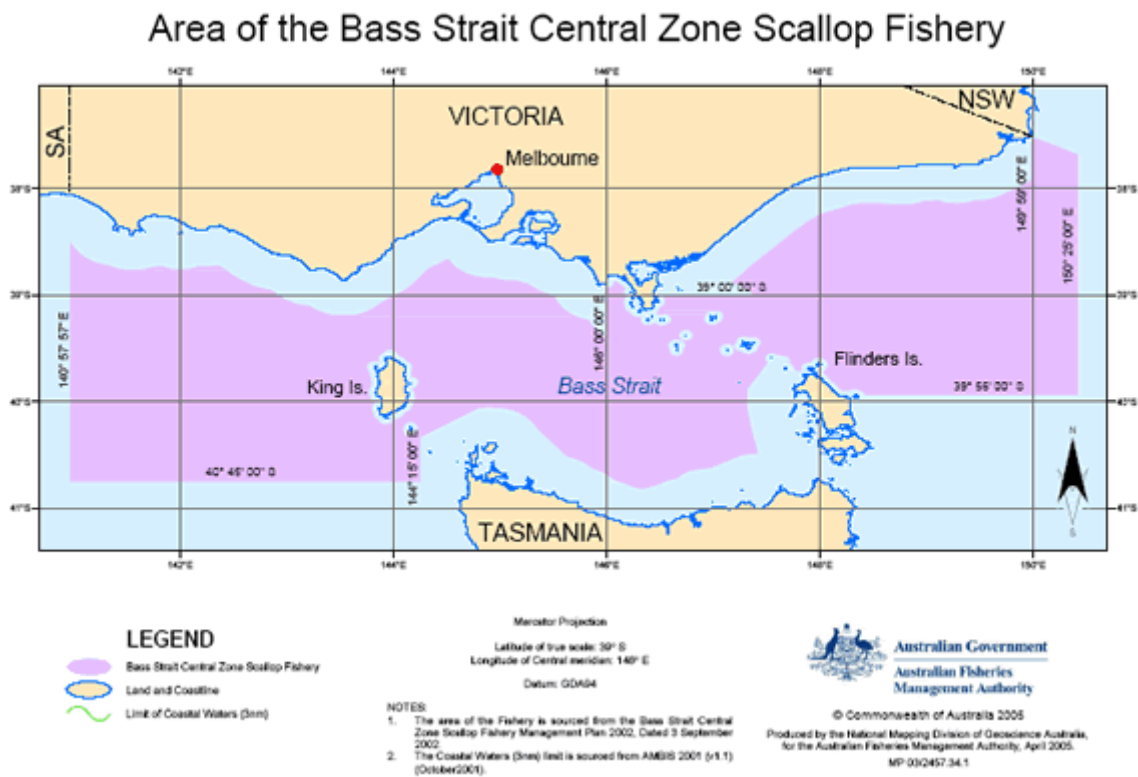


Figure 1. Map indicating the boundaries of the Bass Strait Central Zone Scallop Fishery.

Fishing Methods

Towed dredges are used to collect shellfish such as scallops from the sea floor. The dredge used in the Commonwealth scallop fishery is constructed of a heavy steel frame covered with steel mesh but open on the front side which is towed and is used to dig scallops out of the sand and mud (Fig. 2). The dredge is towed along the bottom until it is full, then lifted onto the boat and the contents tipped out.

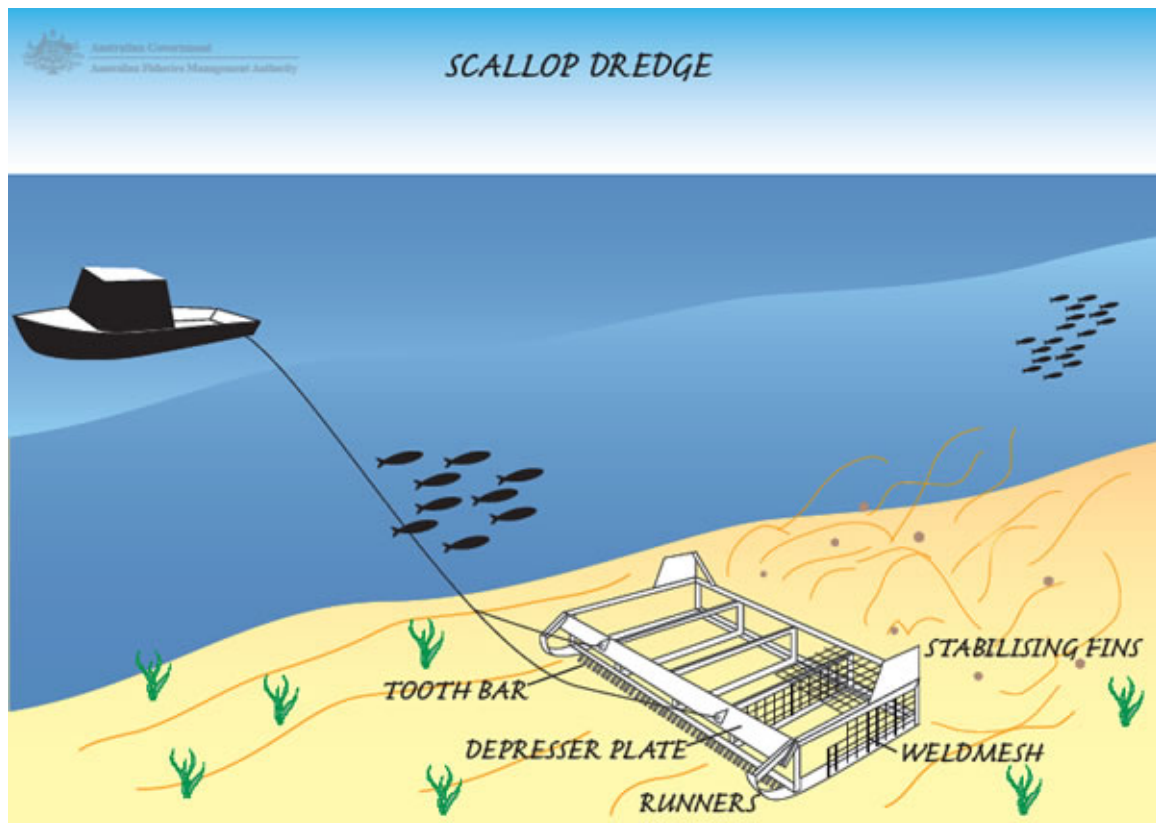


Figure 2. An illustration of a scallop dredge.

Management Arrangements

The fishery is managed under a Management Plan and Statutory Fishing Rights (SFRs), using a combination of input and output controls. Boat SFRs and quota SFRs were issued to all eligible stakeholders in the fishery in December 2004 and took effect from 1 January 2005. Prior to 2005, the scallop fishery was managed under a temporary system of annual fishing permits.

Until 2007, a boat SFR must be held by operators in addition to quota SFRs. Quota SFRs in the fishery will take the form of commercial scallop quota SFRs and doughboy scallop quota SFRs. These rights are fully tradable.

The Management Arrangements include:

- Limited entry fishery
- Statutory Fishing Rights
- Summer closure to allow spat fall and growth
- TAC set annually; was set to zero in 2006
- 90 mm shell length size limit

Species

There is only one main commercially important species of scallop targeted in the fishery: commercial scallop (*Pecten fumatus*). The doughboy scallop (*Chlamys asperimus*) is a byproduct species, for which presently there is no commercial market.

Data Collection

BSCZSF operators are required to complete the 'Bass Strait Central Zone' Daily Fishing Logs'. They are required to send completed logbook sheets to AFMA within 14 days after the end of each month. The data are entered and stored in the AFMA Logbook Database.

RESULTS

Catch and Effort

The gross value of the product (GVP) in the BSCZSF has declined drastically over the past several years (Fig. 3). The highest GVP in the period from 1997-2005 was in 1997/98 at \$7,015,000. This is in contrast to 2005/06 which had a GVP of only \$191,000. As a result of declining catch rates, the BSCZSF was not opened in 1999 (hence the zero GVP). The fishery was opened in 2000 and 2001 to allow fishers to explore new fishing grounds, but no significant areas were discovered and no scallops were landed. In 2003 part of a known scallop bed was opened, but there was little fishing activity.

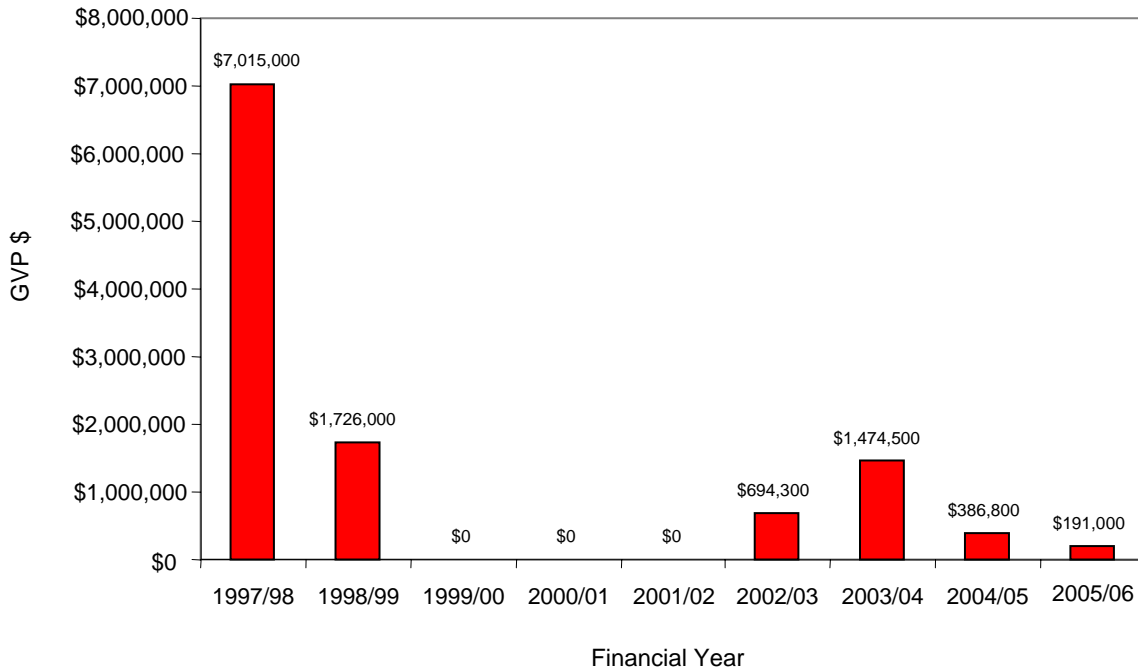


Figure 3. Gross value of the product (GVP) for the BSCZSF for the period 1997/98 to 2005/06.

Similar to the trend in GVP, catch in the BSCZSF has declined significantly (Fig. 4). Catch peaked in 1994, with approximately 8,000 tonnes taken from the fishery. In 2005 the catch was only 173 tonnes. Hours fished have also dropped off significantly, with little fishing activity occurring after the closure in 1999.

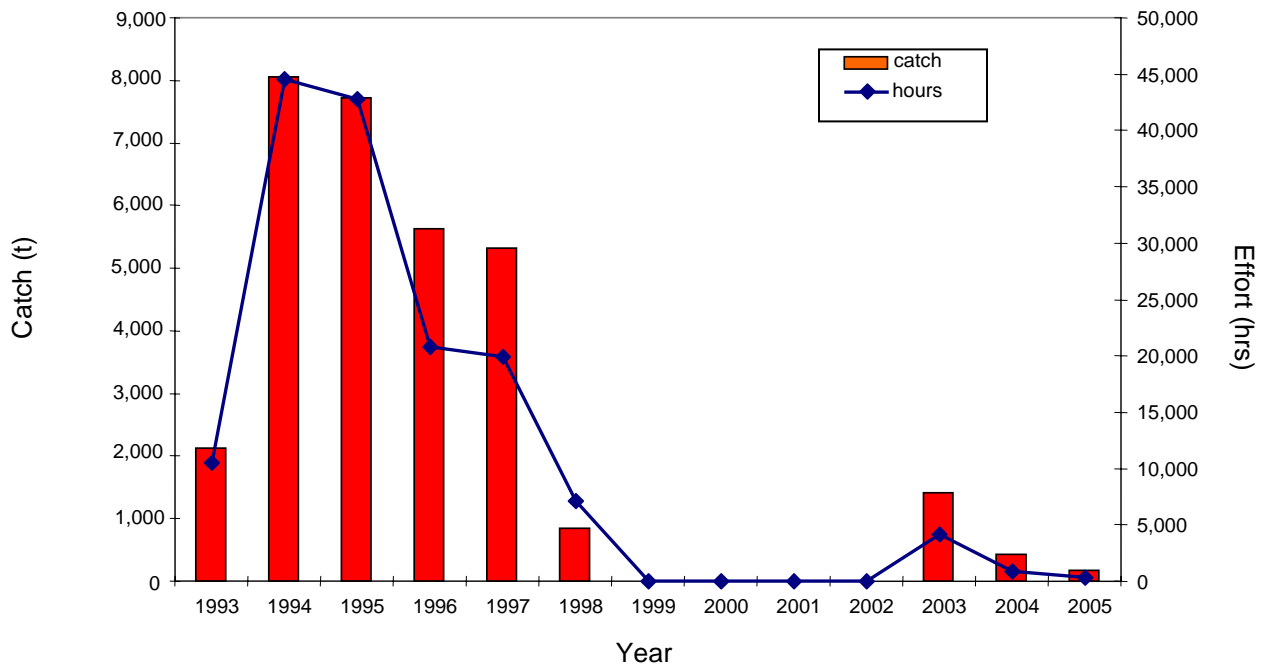


Figure 4. Catch and effort for the BSCZSF for the period 1993 to 2005.

The catch by State in the BSCZSF has also varied over the past several years (Fig. 5). In 2003, the catch by Victorian boats was nearly six times higher than that taken by Tasmanian vessels. In 2005, although the catch had declined overall and Victorian vessels still had higher catches than Tasmanian vessels, the difference in the catches was not as great. Number of vessels in the fishery has dropped for both States in the past several years. This can also be seen in Fig. 6, which depicts total numbers of vessels in the BSCZSF and catch per unit effort.

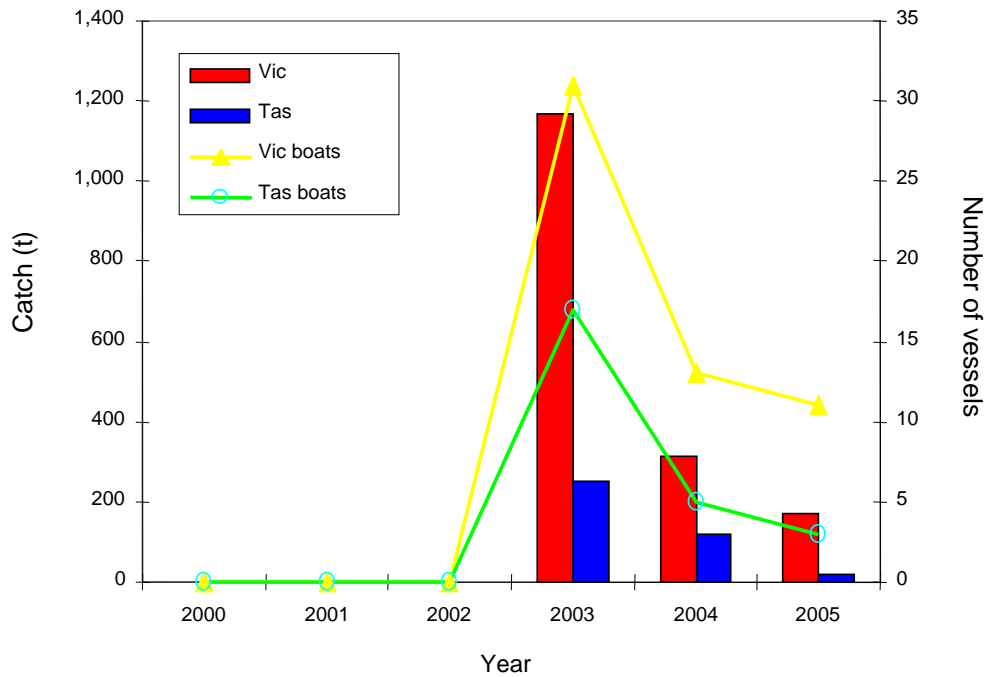


Figure 5. Catch and number of boats by state in the BSCZSF.

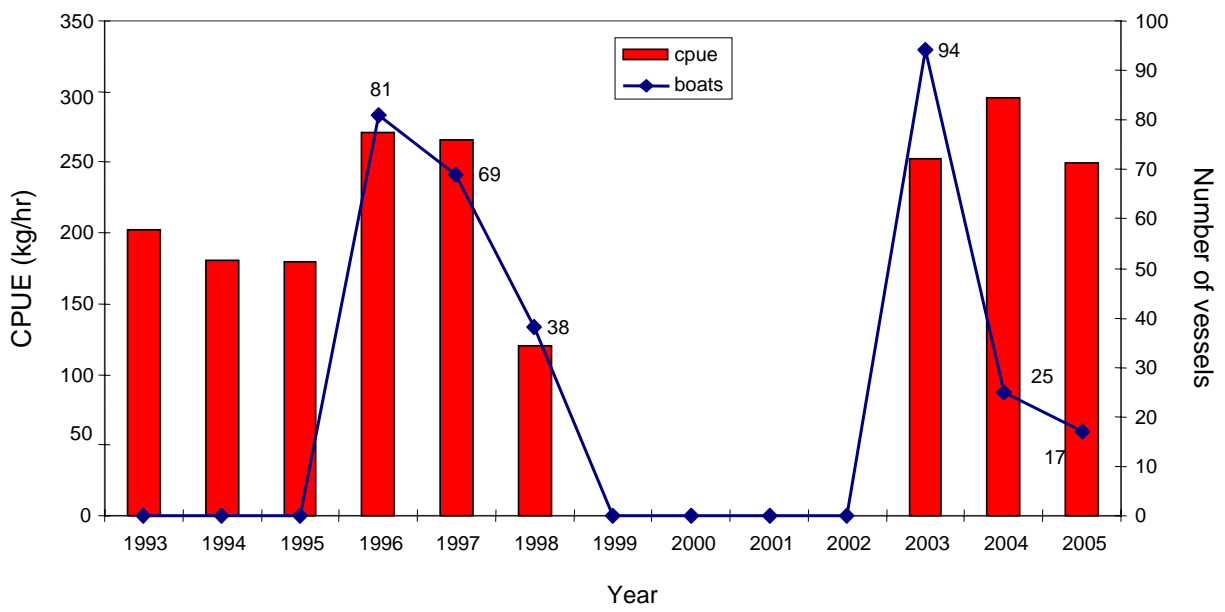


Figure 6. Catch per unit effort (CPUE) and vessel number in the BSCZSC for 1993-2005.

Spatial Catch

Spatially explicit catch data for 2003-2005 indicated that all of the catch in the BSCZSF was taken east of Flinders Island (Fig. 7-9). Fishing in 2000 and 2001 after the 1999 closure failed to find any new beds, as did the continued fishing effort in 2003-2005.

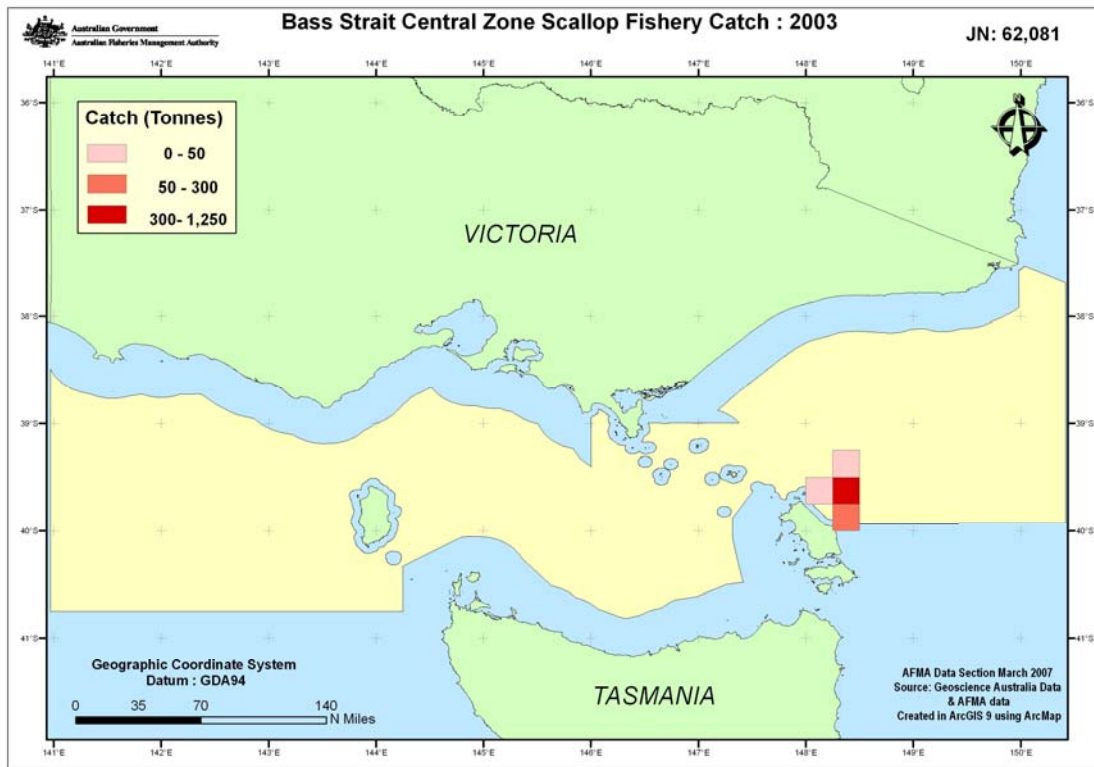


Figure 7. Catch locations in the BSCZSF in 2003.

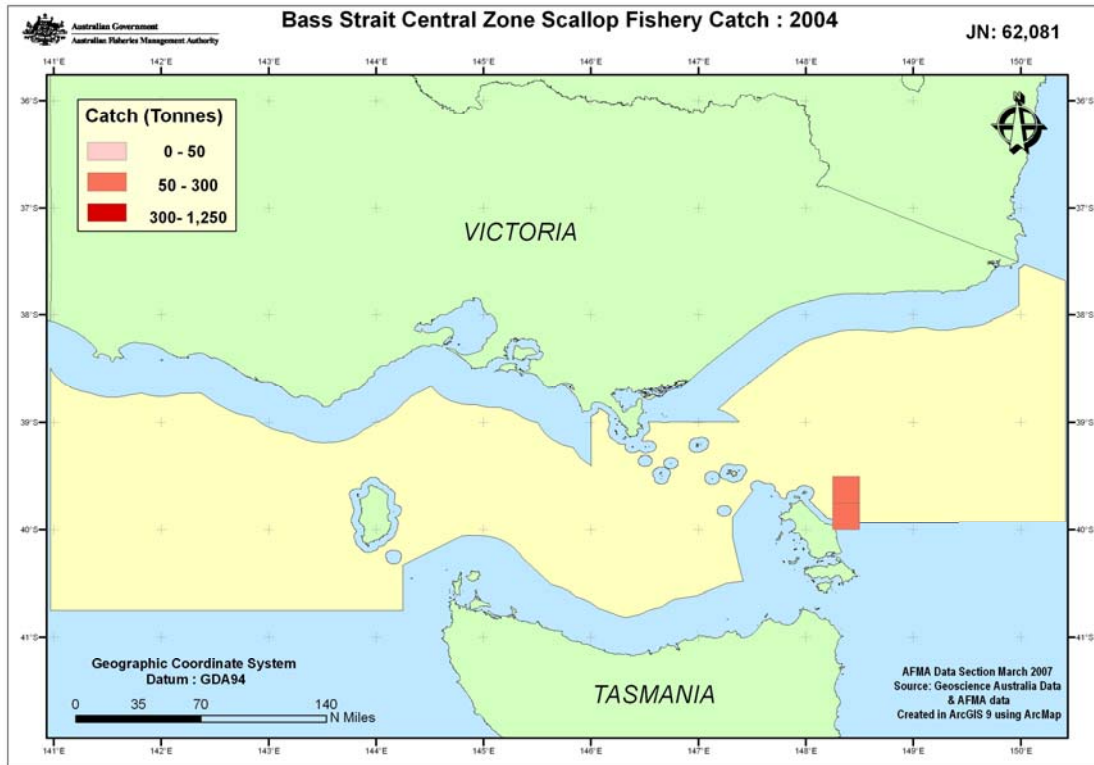


Figure 8. Catch locations in the BSCZSF in 2004.

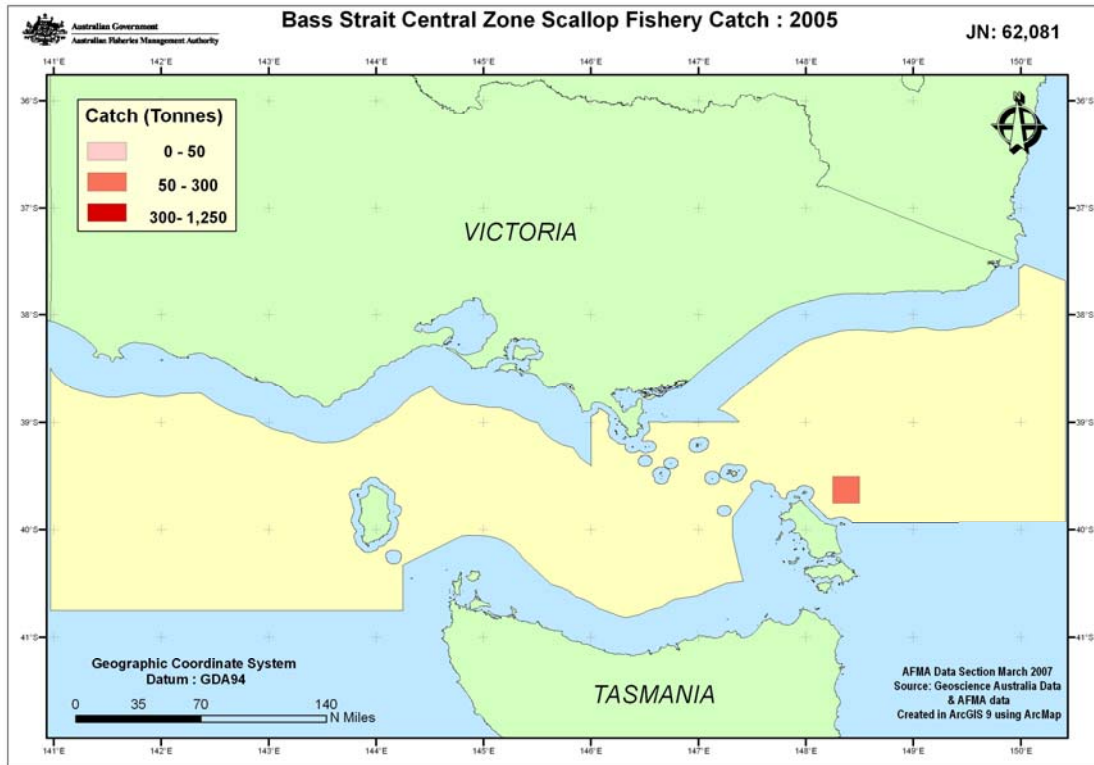


Figure 9. Catch locations in the BSCZSF in 2005.

Bycatch Estimation

Bycatch in the BSCZSF was very low, with only ~90,000 kg of discard between 2000 and 2006. The vast majority of this discard (64%) was comprised of doughboy scallops, for which there is currently no commercial fishery. Oysters accounted for 35% of the discard.

Species	Estimated discard (kg)
Doughboy scallop	56,765
Oysters	31,410
Sponges	60
Gould's Squid	500
Octopuses	71
Bugs	3
Crabs	95
Flathead	43
Flounder	5
Shells	367
Total	89,319

CONCLUSION

The catch of the BSCZSF declined dramatically in the late 1990s, prompting the closure of the fishery. As the BSCZSF was closed in 2006 there is little new data to add. However, surveys of the BSCZSF are currently being planned to assess the available scallop biomass in this fishery, and decision rules are being developed to determine if the fishery will remain closed to fishing or if some portion of it will be reopened.

