# DRAFT BYCATCH ACTION PLAN FOR THE SHARK BAY PRAWN MANAGED FISHERY (SUMMARY REPORT)

By Jo Bunting

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Draft Bycatch Action Plan for the Shark Bay Prawn Managed Fishery (Summary Report) April 2002

Compiled by Jo Bunting

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### - Summary Report -

#### AN INVITATION TO COMMENT

The Department of Fisheries invites people to make a submission on the issues and recommendations of this report *- Draft Bycatch Action Plan for the Shark Bay Prawn Managed Fishery*. This draft plan has been prepared by the Department of Fisheries' Fish and Fish Habitat Protection Program.

Two versions of the draft Bycatch Action Plan for the Shark Bay Prawn Managed Fishery have been released for public comment. The 'Summary Report' (this document - Fisheries Management Paper No. 148) provides a brief summary of the background information used in the development of the plan and focuses on its objectives and actions.

For more detail, the reader is referred to the 'Full Report'. The 'Full Report' (Fisheries Management Paper No. 147) is a comprehensive version of the plan, containing detailed rationale and justification for the objectives and actions proposed in the plan. It also provides detailed background information regarding issues such as the natural environment in Shark Bay, current management arrangements within the prawn fishery and existing information on bycatch.

#### Why Write a Submission?

A submission is a way to provide information, express your opinion and put forward your suggested course of action, including alternative proposals.

The Department of Fisheries will collate and summarise all public submissions received. Analysis of the submissions will be undertaken and recommended changes identified and documented.

Public submissions will be treated as public documents, unless specifically marked confidential, and may be quoted in full or in part in any further reports related to bycatch management in the Shark Bay Prawn Managed Fishery.

#### Developing a Submission

In your submission you may agree, disagree or comment on general issues or specific strategies listed.

It may help to reduce the workload on individuals and increase the pool of ideas and information if you join a group with similar interests and make a joint submission.

It is preferred that you use the Public Comment Form provided. A loose-leaf copy should have accompanied this document, but another copy is bound within the document, for you to photocopy and use (see Appendix E), should you require an extra one.

In the event that you do not wish to use the form provided, you should:

- refer each of your comments to the appropriate section or chapter heading in the report;
- clearly state your point of view;
- indicate your reasoning or source of information; and
- suggest alternate strategies, safeguards or information.

Please remember to include your name, address, the date and whether you want your submission to be confidential.

#### **Closing Date**

A public comment period has been provided. The closing date for submissions is 27 June 2002

#### Contacts

Submissions should be addressed to:

Mr Colin Chalmers Fish & Fish Habitat Protection Program Department of Fisheries Locked Bag No. 39, Cloister Square Post Office PERTH WA 6850

If you wish to discuss the content of the document or require further information, please contact Mr Colin Chalmers (08) 9482 7318.

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### SECTION 1 INTRODUCTION

### 1.1 General

The Shark Bay Prawn Managed Fishery is located within the waters of Shark Bay in the Gascoyne Region of Western Australia (refer Figure 1). The waters of Shark Bay are highly valued, as they are within a World Heritage Property Area and part of a State-administered marine park. The fishery is also highly valued, being worth approximately \$30 million per year, and is a major contributor to the economy and employment in the region.

This Bycatch Action Plan for the Shark Bay Prawn Managed Fishery is the first of its kind in Western Australia. The relatively unselective nature of trawl operations and the World Heritage Area in which the fishery operates have combined to make it the first priority for bycatch management within the State.

### 1.2 Objective of Plan

This draft Bycatch Action Plan for the Shark Bay Prawn Managed Fishery has been prepared to provide a policy framework for the management of bycatch in this fishery. The objective of the plan is to:

"Increase the understanding of the nature and degree of bycatch in the Shark Bay Prawn Managed Fishery in order to develop and implement appropriate and effective management strategies to reduce bycatch generated by the fishery.'

### **1.3** What is Bycatch?

Fishing gear used to trawl for prawns often affects additional untargeted organisms. Some species of untargeted fish are caught in the nets, but a high proportion of these are generally not commercially valuable and subsequently discarded either dead or alive.

Some fish are discarded for other reasons, including legal prohibitions on their take. Other commercially valuable species are often retained. All these organisms are regarded as bycatch.

For the purpose of this Bycatch Action Plan, the following definitions have been adopted. These are consistent with those contained within the Western Australian and National Policy on Fisheries Bycatch (refer to Section 1.4):

- Target Species the highest value catch.
- Bycatch includes discards and also that part of the catch that is not landed but is killed as a result of interactions with fishing gear.
- Byproduct non-target catch, which is commercially valuable and retained by fishers.

• Discards - non-target species that are caught in fishing gear and landed on the deck of a vessel, but are subsequently discarded, either because they have no value (for example there is no market or they are toxic), or because regulations preclude them being retained.

### 1.4 Policy Framework

As the steward of the State's fish resources, the Department of Fisheries has a particular responsibility to lead and coordinate efforts to manage bycatch. In developing this Bycatch Action Plan, the Department of Fisheries has demonstrated its commitments to obligations under a number of State and Commonwealth agreements and policies. These are:

### Commonwealth

- Australia's Oceans Policy
- Commonwealth Environmental Protection and Biodiversity Conservation Act 1999
- Draft Recovery Plan for Marine Turtles in Australia
- National Strategy for the Conservation of Australia's Biological Diversity

#### State

- Fish Resources Management Act 1994
- National Policy on Fisheries Bycatch and Western Australia Policy on Fisheries Bycatch
- Gascoyne Recreational Fishing Review
- Gascoyne Fisheries Environmental Management Review
- Shark Bay Fish Habitat Protection Area Planning

### SECTION 2 CONSULTATIVE METHODOLOGY

### 2.1 Consultation

The Department of Fisheries has prepared this draft Bycatch Action Plan through a consultative process with all stakeholders of the Shark Bay Prawn Managed Fishery, and other groups with an interest or who will be affected by this plan.

Consulted parties included licensees of the fishery, representatives from the recreational and commercial fishing and aquaculture industry, government agencies and authorities, conservation and community groups and other non-government organisations.

The Department of Fisheries will collate and summarise all public submissions received on this draft plan. Analysis of the submissions will be undertaken and recommended changes identified and documented. The content of submissions and recommended amendments will be discussed with stakeholders where necessary.

An amended plan will then be prepared, together with a summary of submissions and a clear justification of the response to each submission. This summary of submissions will be published either as part of the final plan or as a separate document.

### 2.2 Determination of Actions

A list of issues relevant to bycatch management in the Shark Bay Prawn Managed Fishery was developed during the planning phase of this Bycatch Action Plan. This list was based on:

- Consideration of the operational aspects of the Shark Bay Prawn Managed Fishery within the known physical and biological environment of the bay.
- A review of existing information on bycatch data and management techniques within Shark Bay, Western Australia, nationally and internationally.
- Consultation with a range of stakeholders regarding environmental values, social values and expectations, and resource sharing issues.

The issues were:

- Interaction with seagrass habitats;
- Disturbance of benthic communities;
- Mortality of protected species;
- Wastage/collection of large numbers of small fish;
- Local depletion of resources;
- Effects of bycatch on ecological processes of Shark Bay;
- Resource sharing issues;
- Level of bycatch information; and
- Industry benefits.

A discussion of each of the issues, together with the conclusion drawn about its priority and the recommended actions, is contained within the full version of the draft Bycatch Action Plan (Fisheries Management Paper No. 147). The objectives and actions in the plan are derived from the proposed actions relating to each of the issues. For an explanation and justification of the content of the draft Bycatch Action Plan, readers are referred to the full version.

### SECTION 3 BACKGROUND INFORMATION

### 3.1 Overview of the Shark Bay Prawn Managed Fishery

### 3.1.1 Location of Fishery

As defined by the Shark Bay Prawn Managed Fishery Management Plan, the fishery exists within the waters of the Indian Ocean between  $23^{\circ} 24'$  and  $26^{\circ} 30'$  south latitude and adjacent to Western Australia landwards of the 200 metre isobath, together with those waters of Shark Bay south of  $26^{\circ} 30'$  south latitude.

Although the existing licence area gives the impression of an extensive trawl fishery (extending out to 200m isobath), only a small portion of the licence area forms the functional fishery. This is due to fishers targeting the favourable, high yield fishing grounds, and also the exclusion of various areas due to permanent and temporary nursery grounds (under the management plan - refer to Figure 3). Also, trawling is excluded from the sanctuary and recreational zones of the Shark Bay Marine Park and from certain special purpose zones (see Figure 2).

The Shark Bay Prawn Managed Fishery is the most productive prawn-fishery in the State, valued at approximately \$30m annually, and is an important contributor to employment opportunities within the Gascoyne region. There are 27 licensed boats operating in the area and it is the largest prawn fishery in Western Australia.

King prawns are the dominant species, making up about 65 per cent of the catch, while tiger prawns and a small portion of Endeavour prawns make up the rest.

Shark Bay is a World Heritage Area, parts of which are a marine park and a marine nature reserve (Hamelin Pool). The development of the zoning for the Shark Bay Marine Park was based largely on the trawl fishery's permanent and temporary closed areas.

#### 3.1.2 Management Regime

There are a variety of management measures currently in use within the Shark Bay Prawn Managed Fishery, which already contribute to the management of bycatch. These measures include:

- Gear controls (restrictions on mesh size, head rope length, size of otter boards, etc.);
- Seasonal closures (the fishery is generally closed between November and March);
- Temporary area closures (a number of areas are closed for part of the year);
- Time closures (trawling only permitted between 1700 hours and 1800 hours in the majority of the fishing areas, and the fishery is closed over the full moon); and
- Crew restrictions (limit of six crew).

### **3.2** Existing Environment in Shark Bay

Bycatch is a consequence of interactions between trawl gear and the physical and biological environment. Therefore, in order to understand the impacts of bycatch within the Shark Bay Prawn Managed Fishery, it is first necessary to understand the environment in which the fishery operates.

For information on the existing environment in Shark Bay, the reader is referred to the full version of the draft Bycatch Action Plan for the Shark Bay Prawn Managed Fishery, the Gascoyne Fisheries Environmental Management Review (Department of Fisheries, May 2001) and the Review of Bycatch Issues Relevant to the Shark Bay Demersal Fisheries Department of Fisheries, in prep. b).

The commercial trawling operations in Shark Bay commenced in the early 1960s. There is only limited information on the environmental conditions in the bay prior to this, making it difficult to determine if there are any long-term impacts of trawling.

### 3.3 Other Fishing Activities in Shark Bay

Bycatch becomes a resource sharing issue when the species involved are the target of other commercial or recreational fishing operations. When considering bycatch in regard to the Shark Bay Prawn Managed Fishery, it is therefore necessary to consider other fishing operations within the bay.

Other commercial fishing operations within Shark Bay are as follows:

- Shark Bay Scallop Managed Fishery;
- Shark Bay Beach Seine and Mesh Net Managed Fishery;
- Shark Bay Snapper Managed Fishery;
- Wetline Fishery
- Shark Bay Crab Experimental Fishery

For more information, readers are referred to the Gascoyne Region Fisheries Environmental Management Review (Fisheries WA, December 2000).

Recreational fishing is an important activity and industry in Shark Bay. Key recreational fishing pursuits include angling, netting, spear fishing, rock lobster fishing, crabbing and collecting shellfish.

Input on the species important to recreational fishing in Shark Bay was gained from creel surveys and advice from the Regional Recreational Fishing Advisory Committee (RRFAC).

Creel surveys involve collection of data on recreational fishing effort, target species and catches. Surveys are conducted at boat ramps, shore-based fishing localities and other fishing sites. Interpretation of this data, to determine key target species, must be done with caution as records of high numbers caught of a particular species may not necessarily indicate its is a 'prized' one.

The Denham RRFAC states that the key species important to recreational fishers, which need to be addressed by this Bycatch Action Plan, are squid, blue swimmer crabs and pink snapper.

For more information on recreational fishing in the area, readers are referred to the Gascoyne Regional Recreational Fishing Review discussion paper: 'A Quality Future for Recreational Fishing in the Gascoyne' (Gascoyne Recreational Fishing Working Group, 1999) and 'A Five-Year Management Strategy for Recreational Fishing in the Gascoyne Region of Western Australia' (Gascoyne Recreational Fishing Working Group, 2001).

### **3.4 Existing Information on Bycatch**

There is limited existing information on the level and nature of bycatch in the Shark Bay Prawn Managed Fishery. Although this, in turn, limits the perspective of the Bycatch Action Plan, its development has been based on the 'best data available' approach, recognising the need for further research.

The extent of the existing information is contained in the following sources:

- Department of Fisheries' Catch and Effort Statistics System (CAESS), which contains data on declared non-target catch in the fishery (as part of what is known as 'Monthly Returns', which is provided by fishers and details their catches).
- WA Museum Trawl Survey 1997.
- Shark Bay Bycatch Reduction Trials Observer Data.

For detailed information on these sources, the reader is referred to 'A Review of Bycatch Issues Relevant to the Shark Bay Demersal Trawl Fisheries' (Department of Fisheries, in prep. b).

#### 3.4.1 CAESS Data Information

Data was obtained from the CAESS relating to the Shark Bay Prawn Managed Fishery from 1992/93 to 1996/97. From this it can be seen that the dominant by-products in the fishery, in terms of weight and value, are crabs, cuttlefish, samson fish, shark, squid and, to a lesser extent, mulloway.

It should be noted that some of this 'by-product' is unlikely to have been caught by trawling, but rather by other methods under a vessel's WAFBL. For instance, samsonfish and shark are more likely to have been caught by wetlining.

#### 3.4.2 WA Museum Trawl Survey 1997

During November 1997, in conjunction with the annual scallop stock survey, bycatch taken using nets with standard prawn mesh was sampled from 73 trawl shots of 20-minutes duration between the northern end of Bernier Island and Freycinet Estuary. This information was collected and identified by staff of the WA Museum working aboard the Department of Fisheries' *RV Flinders*.

The gear consisted of twin 8-fathom head-rope otter trawls fitted with 45mm stretched mesh cod ends, and trawling was conducted at night. From catch records and observation by Department of Fisheries staff, the catch was consistent with that taken by commercial prawn trawlers in Shark Bay.

#### 3.4.3 Shark Bay Bycatch Reduction Trials Observer Data

Bycatch Reduction Devices (BRDs) is the term given to those devices fitted to existing fishing gear in order to reduce the amount - or change the nature - of bycatch collected during fishing. There have been several types of BRDs designed for trawl gear and these are discussed in detail in the document 'A Review of Bycatch Issues relevant to the Shark Bay Demersal Trawl Fisheries' (Department of Fisheries, in prep. b).

Trials of BRDs in the Shark Bay Prawn Managed Fishery commenced in 1998, funded through the Commonwealth's Natural Heritage Trust, State Development and Better Interests funds, and in-kind support from industry. The aim of the project was to test the two main types of BRDs used in prawn fisheries - grids (which exclude large organisms such as turtles, sharks and rays) and fish exclusion devices (which allow actively swimming fish to escape).

The overall objectives of the bycatch gear trials were to determine the most effective combination of BRDs in reducing bycatch without damaging the prawn catch and lowering its commercial value.

The formal trials were completed in August 1999, and the details of the results will be contained within a report to the Natural Heritage Trust (Department of Fisheries, in prep. a). The outcomes of the trials are summarised below:

- No turtles were caught in the BRD net in any of the trials.
- Two BRD configurations performed well at reducing bycatch and minimising the loss of king and tiger prawns. These were the Pyramid BRD, a peaked grid with a radial escapement device, and the Olsen BRD, which is essentially an angled grid with 'fish-eye' openings on either side of the grid.
- Fish exclusion devices appear to be successful at reducing bycatch of some fish species.
- Across all trials and devices tested, it appears that less seasnakes were caught in the net fitted with BRDs than in the standard net.
- Grids do occasionally clog with weed.

An observer program ran concurrently with the BRD trials to record information on the level of bycatch from both the standard net and the BRD net being trialled. Based on this observer program, the ratio of discards to target to target and by-product weight has been estimated to be approximately 4 - 8:1 (note there is a very high variability of the amounts of bycatch caught).

Fisheries Management Paper No. 148

### SECTION 4 THE DRAFT BYCATCH ACTION PLAN

### 4.1 Vision Statement

"To increase understanding of bycatch in the Shark Bay Prawn Managed Fishery and develop appropriate reduction devices, operational procedures, codes of conduct and other management strategies, to reduce the bycatch generated in the fishery and protect the World Heritage Values of Shark Bay."

### 4.2 **Objectives and Actions**

The objectives and actions that constitute the draft Bycatch Action Plan for the Shark Bay Prawn Managed Fishery are provided in Table 1 overleaf. The objectives fall under four broad categories of research, management, monitoring, reporting, and public awareness and education.

Each action in the draft Bycatch Action Plan is assigned a party responsible for its implementation and a required timeframe. The Shark Bay Prawn Managed Fishery is a full cost recovered fishery and the undertaking of the actions detailed in this plan will be funded under these arrangements.

#### Table 1 Summary of Draft Bycatch Action Plan for the Shark Bay Prawn Managed Fishery

OBJECTIVE	ACTION	RESPONSIBLE	TIME FRAME
	RESEARCH OBJECTIVES		
<b>Objective 1.</b> To gain a better understanding of the quantity, diversity and impact of bycatch in the Shark Bay Prawn Managed Fishery in order	Action 1a. Design and implement a scientific observer program to gather information about bycatch in the fishery.	Department of Fisheries	Commenced at beginning of 2000 season. Ongoing.
to refine management strategies.	Action 1b. Establish a Bycatch Journal system to be used across all fleet vessels.	Department of Fisheries	Commenced at beginning of 2000 season.
	Action 1c. Seek funding to undertake research into the distribution of valuable or sensitive habitats, and the distribution of fish species within the trawl grounds of Shark Bay.	Department of Fisheries	Ongoing.
	MANAGEMENT OBJECTIVES	·	
<b>Objective 2.</b> Reduce bycatch of large animals and snakes.	Action 2a. Develop appropriate BRDs to exclude large objects from trawl nets.	Department of Fisheries/Industry	Commenced in 1998. Developments and improvements are continuing.
	Action 2b. Ensure that a BRD containing a grid capable of excluding large objects from trawl nets is implemented into the Shark Bay Prawn Managed Fishery (note: this action relates to the combination of a grid and a fish exclusion device).	Department of Fisheries/Industry	Implementation of BRD to commence at beginning of 2000 season with one BRD. Two BRDs to be introduced, following instruction from Department of Fisheries' Research Division.
	<b>Action 2c.</b> Continue to improve the BRD design used by the Shark Bay Prawn Managed Fishery fleet in light of new data.	Department of Fisheries/Industry	Ongoing
	<b>Action 2d.</b> Develop and adopt codes of conduct to reduce impacts to marine animals.	Industry	Development of protocol and process to be determined by the end of the 2002 season.
	<b>Action 2e.</b> Develop a decision-making process and protocol for use of BRDs in high-density weed.	Department of Fisheries/Industry	Development of protocol process to be determined by the end of the 2002 season.

#### Table 1 Summary of Draft Bycatch Action Plan for the Shark Bay Prawn Managed Fishery (continued)

OBJECTIVE	ACTION	RESPONSIBLE	TIME FRAME
<b>Objective 3.</b> Reduce collection and mortality of undersized fish.	Action 3a. Ensure that a BRD incorporating a fish exclusion device to exclude undersized fish from trawl nets is implemented into the fishery (note: this action relates to the combination of a grid and a fish exclusion device).	Department of Fisheries	Implementation of BRD commenced at beginning of 2000 season. Full implementation to occur by commencement of 2002 season.
	<b>Action 3b.</b> Develop and implement codes of conduct to increase the survival of undersized fish.	Department of Fisheries/Industry	Code of conduct developed by end of 2002.
<b>Objective 4.</b> Reduce wastage in the fishery resulting from the mortality of incidental catch.	<b>Action 4a.</b> Implement a BRD incorporating an optimal fish exclusion device capable of excluding small fish from trawl nets.	Department of Fisheries/Industry	Implementation of BRD to commence at beginning of 2000 season. Further research still required.
	<b>Action 4b.</b> Continue to improve the BRDs used by the fleet in light of new data.	Department of Fisheries/Industry	Ongoing
	Action 4c. Formalise, in a code of conduct, the practice of vessels avoiding areas of high bycatch.	Industry	To be complete within 12 months of obtaining information on high bycatch density areas.
<b>Objective 5.</b> Minimise the effects of trawling on species diversity and habitat diversity.	Action 5a. In coordination with Action 5b, re-assess the trawl ground boundaries, based on an analysis of trawling effort and investigations into the distribution of fish species inside and outside of the trawl boundaries within Shark Bay.	Department of Fisheries	Within 12 months of gathering appropriate data (under Action 1c).
	Action 5b. In coordination with Action 5a, re-assess the trawl ground boundaries based on an analysis of trawling effort and investigations into the distribution of benthic habitats and fish species in Shark Bay (refer Action 1c).	Department of Fisheries	Within twelve months of gathering appropriate data (under Action 1c).
	Action 5c. Reduce the trawl-induced mortality of small fish caught in trawl nets (refer to <b>Objective 3</b> ).	Department of Fisheries	Refer Objective 3.
	Action 5d. Investigate the possibility of reducing the length of the Shark Bay Prawn Managed Fishery season.	Department of Fisheries/Industry	Within twelve months of gathering appropriate data (under Action 1c).

#### Table 1 Summary of Draft Bycatch Action Plan for the Shark Bay Prawn Managed Fishery (continued)

OBJECTIVE	ACTION	RESPONSIBLE	TIME FRAME
<b>Objective 6.</b> To assist skippers and crew in the implementation of the Bycatch Action Plan.	<b>Action 6a.</b> Assist skippers and crews in the installation and operation of BRDs.	Department of Fisheries	Ongoing
	Action 6b. Provide information to skippers and crew in the identification of protected species.	Department of Fisheries	Ongoing
	Action 6c. Ensure that new crews and skippers are aware of their obligations under this plan.	Industry/Department of Fisheries	Ongoing
<b>Objective 7.</b> Monitor the effectiveness of BRDs and other management initiatives.	<b>Action 7a.</b> Review data from Bycatch Journal and Observer Programs to determine bycatch information.	Department of Fisheries	Ongoing and as necessary
	Action 7b. Form strategic links with other research programs in Shark Bay to provide mechanisms to assess flow-on effects of bycatch reduction.	Department of Fisheries	Ongoing
	Action 7c. Consult with licensees, skippers and the Management Advisory Committee to discuss the management arrangements.	Department of Fisheries	First meeting four months after implementation of the plan; then at the end of that season; then as necessary.
	Action 7d. Consult with peak representative bodies.	Department of Fisheries	Ongoing.
	MONITORING AND REPORTING OBJECTIVES		
<b>Objective 8.</b> Report on the progress and review the Bycatch Action Plan.	Action 8a. Ensure that the progress and outcomes of the Bycatch Action Plan are reported.	Department of Fisheries	Annually within State of Fisheries Report.
	Action 8b. Review Bycatch Action Plan after two years.	Department of Fisheries	Two years from introduction of final Bycatch Action Plan.
	PUBLIC AWARENESS AND EDUCATION OBJECTIVES		
<b>Objective 9.</b> To inform the community of Western Australia and Australians of the management arrangements for bycatch in the Shark Bay Prawn Managed Fishery.	Action 9a. Publicise and promote the management of bycatch in the Shark Bay Prawn Managed Fishery.	Department of Fisheries	Ongoing

# SECTION 5 FIGURES

Figure 1 Locality Map

# Figure 2 World Heritage Property and Marine Park Zones

# Figure 3 Shark Bay Prawn Managed Fishery: Major Features

Fisheries Management Paper No. 148

### **SECTION 6 REFERENCES**

Commonwealth of Australia. (1996) *The National Strategy for the Conservation of Australia's Biological Diversity*. Commonwealth Department of the Environment, Sport and Territories.

Commonwealth of Australia. (1998a) Australia's Ocean Policy. Commonwealth Department of the Environment, Sport and Territories.

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Fisheries WA (2000). Gascoyne Fisheries Environmental Management Review. Fisheries Environmental Management Review No. 1, Fisheries WA.

Gascoyne Recreational Fishing Working Group (1999). Gascoyne Recreational Fishing Review - A Quality Future for Recreational Fishing in the Gascoyne. Proposals for Community Discussion. Fisheries Management Paper No. 124.

Gascoyne Recreational Fishing Working Group (2001). 'A Five-Year Management Strategy for Recreational Fishing in the Gascoyne Region of Western Australia. Final Report of the Gascoyne Recreational Fishing Working Group. Fisheries Management Paper No. 154.

Standing Committee on Fisheries and Aquaculture (1998). National Policy on Fisheries Bycatch.

Fisheries Management Paper No. 148

### APPENDIX A PUBLIC COMMENT FORM

#### PUBLIC COMMENT FORM DRAFT BYCATCH ACTION PLAN FOR THE SHARK BAY PRAWN MANAGED FISHERY

#### - Full Report -

Send to:	Colin Chalmers
	Fish & Fish Habitat Protection Program
	Department of Fisheries
	Locked Bag No. 39, Cloister Square Post Office
	PERTH WA 6850

Name:

**Organisation** (if applicable):

Address:

#### HOW TO FILL OUT THE PUBLIC COMMENT FORM

#### **SECTION 1 - SPECIFIC COMMENTS**

Section 1 of the Public Comment Form is in a table format and is designed for you to provide comment on specific aspects of the Action Plan. Column One of the table summarises each of the objectives and actions of the Bycatch Action Plan.

In Column Two of the table you should indicate whether you think that the relevant Objective/Action is appropriate. You can do this by circling whether you agree, strongly agree, disagree or strongly disagree with that Objective/Action (1 = strongly agree; 2 = agree; 3 = disagree; 4 = strongly disagree).

In Column Three you should provide any comments you may have about that Objective/Action. If you disagree or strongly disagree with that Objective/Action, you should state your reason.

### **SECTION 2 - GENERAL COMMENTS**

Section 2 of the Public Comment Form provides space for you to provide your comment about any other aspects of the Bycatch Action Plan, e.g. the appropriateness of the methodology, any aspects you think are missing from the plan, etc.

# PUBLIC COMMENT FORM DRAFT BYCATCH ACTION PLAN FOR THE SHARK BAY PRAWN MANAGED FISHERY Summary Report

# **SECTION 1 - SPECIFIC COMMENTS**

1 = strongly agree; 2 = agree; 3 = disagree; 4 = strongly disagree

COLUMN ONE OBJECTIVE/ACTION	Wh	COLUI at do y Object	<b>ou th</b> i		COLUMN THREE Comments/Reasons for Disagreeing/Reasons for Agreement
RESEARCH OBJECTIVES	_				
<b>OBJECTIVE 1.</b> TO GAIN A BETTER UNDERSTANDING OF THE QUANTITY, DIVERSITY AND IMPACT OF BYCATCH IN THE SHARK BAY PRAWN MANAGED FISHERY, IN ORDER TO REFINE MANAGEMENT STRATEGIES.	1	2	3	4	
<b>Action 1a.</b> Design and implement a scientific observer program to gather information about bycatch in the fishery.	1	2	3	4	
Action 1b. Establish a Bycatch Journal System to be used across all fleet vessels.	1	2	3	4	
Action 1c. Seek funding to undertake research into the distribution of valuable or sensitive habitats, and distribution of fish species, within the trawl grounds of Shark Bay.	1	2	3	4	

COLUMN ONE OBJECTIVE/ACTION	Wh		you th	WO hink of Action ?	COLUMN THREE Comments/Reasons for Disagreeing/Reasons for Agreement
MANAGEMENT OBJECTIVES					
<b>OBJECTIVE 2.</b> REDUCE THE BYCATCH OF LARGE ANIMALS AND SNAKES.	1	2	3	4	
Action 2a. Develop appropriate BRDs to exclude large objects from trawl nets.	1	2	3	4	
Action 2b. Ensure that a BRD containing a grid capable of excluding large objects from trawl nets is implemented into the fishery (note that this action relates to the combination of a grid and a fish exclusion device).	1	2	3	4	
Action 2c. Continue to improve the BRD design used by the fleet in the light of new data.	1	2	3	4	
<b>Action 2d.</b> Develop and adopt a code of conduct to reduce impacts to marine animals.	1	2	3	4	
Action 2e. Develop a decision-making process and protocol for use of BRDs in high-density weed (Department of Fisheries/Industry).	1	2	3	4	
<b>OBJECTIVE 3.</b> REDUCE COLLECTION AND MORTALITY OF UNDERSIZED FISH	1	2	3	4	
Action 3a. Ensure that a BRD incorporating a fish exclusion device to exclude undersized fish from the trawl net is implemented into the fishery (note that this action relates to the combination of a grid and a fish exclusion device).	1	2	3	4	
Action 3b. Develop and implement codes of conduct to increase the survivorship of undersized fish.	1	2	3	4	

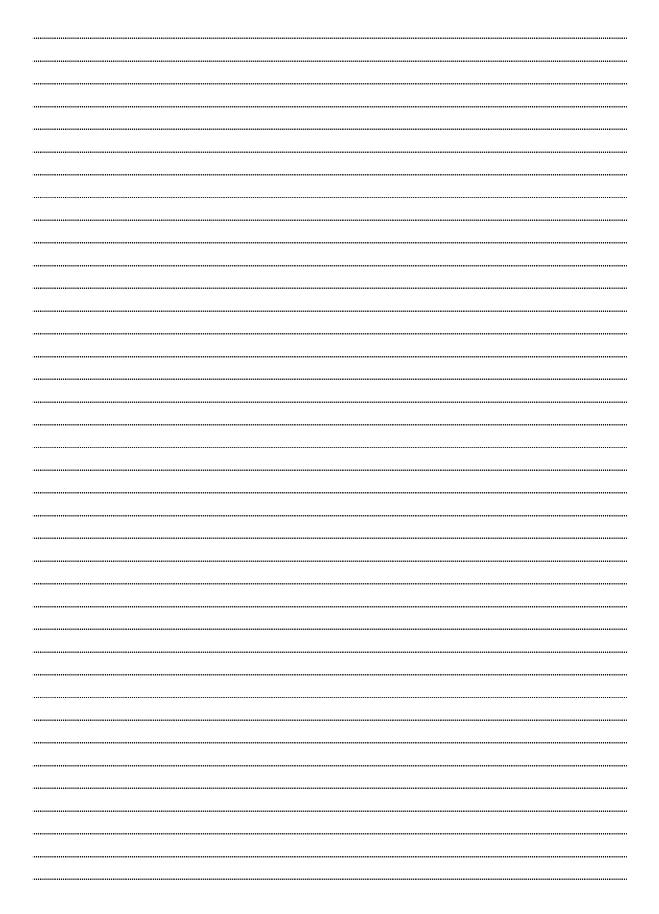
COLUMN ONE OBJECTIVE/ACTION	Wh		you th	NO hink of ction ?	COLUMN THREE Comments/Reasons for Disagreeing/Reasons for Agreement
<b>OBJECTIVE 4.</b> REDUCE WASTAGE IN THE FISHERY RESULTING FROM THE MORTALITY OF INCIDENTAL CATCH.	1	2	3	4	
Action 4a. Implement a BRD incorporating an optimal fish exclusion device capable of excluding small fish from trawl nets.	1	2	3	4	
Action 4b. Continue to improve the BRDs used by the fleet in light of new data.	1	2	3	4	
Action 4c. Formalise, in a code-of-conduct, the practice of vessels avoiding areas of high bycatch.	1	2	3	4	
<b>OBJECTIVE 5.</b> MINIMISE THE EFFECTS OF TRAWLING ON SPECIES DIVERSITY AND HABITAT DIVERSITY.	1	2	3	4	
Action 5a. In coordination with Action 5b, re-assess the trawl ground boundaries based on an analysis of trawling effort and investigations into the distribution of fish species within and outside the trawl boundaries of Shark Bay.	1	2	3	4	
Action 5b. In coordination with Action 5a, re-assess the trawl ground boundaries based on an analysis of trawling effort and investigations into the distribution of benthic habitats and fish species in Shark Bay (refer Action 1c).	1	2	3	4	
Action 5c. Reduce the trawl-induced mortality of small fish caught in trawl nets (refer Objective 3).	1	2	3	4	
Action 5d. Investigate the possibility of reducing the length of the Shark Bay Prawn Managed Fishery season.	1	2	3	4	

COLUMN ONE OBJECTIVE/ACTION	Wh		you th	WO hink of Action ?	COLUMN THREE Comments/Reasons for Disagreeing/Reasons for Agreement
<b>OBJECTIVE 6.</b> TO ASSIST SKIPPERS AND CREW IN THE IMPLEMENTATION OF THE BYCATCH ACTION PLAN.	1	2	3	4	
Action 6a. Assist skippers and crews in the installation and operation of BRDs.	1	2	3	4	
Action 6b. Provide information to skippers and crew to aid in the identification of protected species.	1	2	3	4	
Action 6c. Ensure that all new crew and skippers are aware of the obligations under this plan.	1	2	3	4	
<b>OBJECTIVE 7.</b> MONITOR THE EFFECTIVENESS OF BRDS AND OTHER MANAGEMENT INITIATIVES	1	2	3	4	
<b>Action 7a.</b> Review data from Bycatch Journal and Observer Program to determine bycatch information.	1	2	3	4	
<b>Action 7b.</b> Form strategic links with other research programs in Shark Bay to provide mechanisms to assess flow-on effects of bycatch reduction.	1	2	3	4	
Action 7c. Consult with licensees, skippers and the Management Advisory Committee to discuss the management arrangements.	1	2	3	4	
Action 7d. Consult with peak representative bodies.	1	2	3	4	

COLUMN ONE OBJECTIVE/ACTION	Wh		you th	NO hink of action ?	COLUMN THREE Comments/Reasons for Disagreeing/Reasons for Agreement
MONITORING AND REPORTING OBJECTIVES	-				
<b>OBJECTIVE 8.</b> REPORT ON THE PROGRESS AND REVIEW OF THE BYCATCH ACTION PLAN.	1	2	3	4	
Action 8a. Ensure that the progress and outcomes of the Bycatch Action Plan are reported.	1	2	3	4	
Action 8b. Review Bycatch Action Plan after two years.	1	2	3	4	
PUBLIC AWARENESS AND EDUCATION OBJECTIVES	<u> </u>				
<b>OBJECTIVE 9.</b> TO INFORM THE COMMUNITY OF WESTERN AUSTRALIA AND AUSTRALIA OF THE MANAGEMENT ARRANGEMENTS FOR BYCATCH IN THE SHARK BAY TRAWL MANAGED FISHERY.	1	2	3	4	
<b>Action 9a.</b> Publicise and promote the management of bycatch in Shark Bay Prawn Managed Fishery.	1	2	3	4	

# **SECTION 2 - GENERAL COMMENTS**

Please provide any general comments you have on the plan here.



Fisheries Management Paper No. 148

#### FISHERIES MANAGEMENT PAPERS

- No. 1 The Report of the Southern Western Australian Shark Working Group. Chairman P. Millington (1986)
- No. 2 The report of the Fish Farming Legislative Review Committee. Chairman P.Rogers (1986)
- No. 3 Management Measures for the Shark Bay Snapper 1987 Season. P. Millington (1986)
- No. 4 The Esperance Rock Lobster Working Group. Chairman A. Pallot (1986)
- No. 5 The Windy Harbour Augusta Rock Lobster Working Group. Interim Report by the Chairman A. Pallot (1986)
- No. 6 The King George Sound Purse Seine Fishery Working Group. Chairman R. Brown (1986)
- No. 7 Management Measures for the Cockburn Sound Mussel Fishery. H. Brayford (1986)
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- No. 145 The Aquaculture of non-endemic species in Western Australia Silver Perch (*Bidyanus bidyanus*). As amended October 2000. Tina Thorne. This replaces Fisheries Management Paper No. 107
- No. 146 Sustainable Tourism Plan for the Houtman Abrolhos Islands (February 2001)

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