



Department of  
Primary Industries and  
Regional Development

Research Library

---

Fisheries management papers

Fisheries Research

---

4-2002

## Draft bycatch action plan for the Shark Bay Prawn Managed Fishery (Summary Report)

Jo Bunting

Follow this and additional works at: [https://researchlibrary.agric.wa.gov.au/fr\\_fmp](https://researchlibrary.agric.wa.gov.au/fr_fmp)



Part of the [Aquaculture and Fisheries Commons](#), [Environmental Policy Commons](#), [Legislation Commons](#), and the [Population Biology Commons](#)

---

### Recommended Citation

Bunting, J. (2002), *Draft bycatch action plan for the Shark Bay Prawn Managed Fishery (Summary Report)*. Department of Fisheries Western Australia, Perth. Report No. 147.

This report is brought to you for free and open access by the Fisheries Research at Research Library. It has been accepted for inclusion in Fisheries management papers by an authorized administrator of Research Library. For more information, please contact [library@dpird.wa.gov.au](mailto:library@dpird.wa.gov.au).

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

By Jo Bunting

---

FISHERIES MANAGEMENT PAPER NO. 148

---

Department of Fisheries  
3<sup>rd</sup> Floor, SGIO Atrium  
168-170 St Georges Terrace  
Perth WA 6000

April 2002

ISSN 0819-4327



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

Compiled by Jo Bunting

Fisheries Management Paper No. 148  
ISSN 0819-4327



# **DRAFT BYCATCH ACTION PLAN FOR THE SHARK BAY PRAWN MANAGED FISHERY**

## **- 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.

# Table of Contents

<b>SECTION 1</b>	<b>INTRODUCTION</b> .....	<b>1</b>
1.1	GENERAL .....	1
1.2	OBJECTIVE OF PLAN.....	1
1.3	WHAT IS BYCATCH? .....	1
1.4	POLICY FRAMEWORK.....	2
<b>SECTION 2</b>	<b>CONSULTATIVE METHODOLOGY</b> .....	<b>3</b>
2.1	CONSULTATION.....	3
2.2	DETERMINATION OF ACTIONS .....	3
<b>SECTION 3</b>	<b>BACKGROUND INFORMATION</b> .....	<b>5</b>
3.1	OVERVIEW OF THE SHARK BAY PRAWN MANAGED FISHERY .....	5
3.1.1	<i>Location of Fishery</i> .....	5
3.1.2	<i>Management Regime</i> .....	5
3.2	EXISTING ENVIRONMENT IN SHARK BAY .....	6
3.3	OTHER FISHING ACTIVITIES IN SHARK BAY .....	6
3.4	EXISTING INFORMATION ON BYCATCH.....	7
3.4.1	<i>CAESS Data Information</i> .....	7
3.4.2	<i>WA Museum Trawl Survey 1997</i> .....	8
3.4.3	<i>Shark Bay Bycatch Reduction Trials Observer Data</i> .....	8
<b>SECTION 4</b>	<b>THE DRAFT BYCATCH ACTION PLAN</b> .....	<b>11</b>
4.1	VISION STATEMENT .....	11
4.2	OBJECTIVES AND ACTIONS.....	11
<b>SECTION 5</b>	<b>FIGURES</b> .....	<b>15</b>
<b>SECTION 6</b>	<b>REFERENCES</b> .....	<b>19</b>
<b>APPENDIX A</b>	<b>PUBLIC COMMENT FORM</b> .....	<b>21</b>
<b>FISHERIES MANAGEMENT PAPERS</b> .....		<b>31</b>

## List of Figures

<b>FIGURE 1</b>	<b>LOCALITY MAP</b>
<b>FIGURE 2</b>	<b>WORLD HERITAGE PROPERTY AND MARINE PARK ZONES</b>
<b>FIGURE 3</b>	<b>SHARK BAY PRAWN MANAGED FISHERY: MAJOR FEATURES</b>



## **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° 24' and 26° 30' south latitude and adjacent to Western Australia landwards of the 200 metre isobath, together with those waters of Shark Bay south of 26° 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).





## **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
<b>RESEARCH OBJECTIVES</b>			
<p><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.</p>	<p><b>Action 1a.</b> Design and implement a scientific observer program to gather information about bycatch in the fishery.</p>	<p>Department of Fisheries</p>	<p>Commenced at beginning of 2000 season. Ongoing.</p>
	<p><b>Action 1b.</b> Establish a Bycatch Journal system to be used across all fleet vessels.</p>	<p>Department of Fisheries</p>	<p>Commenced at beginning of 2000 season.</p>
	<p><b>Action 1c.</b> 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.</p>	<p>Department of Fisheries</p>	<p>Ongoing.</p>
<b>MANAGEMENT OBJECTIVES</b>			
<p><b>Objective 2.</b> Reduce bycatch of large animals and snakes.</p>	<p><b>Action 2a.</b> Develop appropriate BRDs to exclude large objects from trawl nets.</p>	<p>Department of Fisheries/Industry</p>	<p>Commenced in 1998. Developments and improvements are continuing.</p>
	<p><b>Action 2b.</b> 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).</p>	<p>Department of Fisheries/Industry</p>	<p>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.</p>
	<p><b>Action 2c.</b> Continue to improve the BRD design used by the Shark Bay Prawn Managed Fishery fleet in light of new data.</p>	<p>Department of Fisheries/Industry</p>	<p>Ongoing</p>
	<p><b>Action 2d.</b> Develop and adopt codes of conduct to reduce impacts to marine animals.</p>	<p>Industry</p>	<p>Development of protocol and process to be determined by the end of the 2002 season.</p>
	<p><b>Action 2e.</b> Develop a decision-making process and protocol for use of BRDs in high-density weed.</p>	<p>Department of Fisheries/Industry</p>	<p>Development of protocol process to be determined by the end of the 2002 season.</p>

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.	<b>Action 3a.</b> 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
	<b>Action 4c.</b> 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.	<b>Action 5a.</b> 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).
	<b>Action 5b.</b> 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).
	<b>Action 5c.</b> Reduce the trawl-induced mortality of small fish caught in trawl nets (refer to <b>Objective 3</b> ).	Department of Fisheries	Refer Objective 3.
	<b>Action 5d.</b> 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
	<b>Action 6b.</b> Provide information to skippers and crew in the identification of protected species.	Department of Fisheries	Ongoing
	<b>Action 6c.</b> 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
	<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.	Department of Fisheries	Ongoing
	<b>Action 7c.</b> 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.
	<b>Action 7d.</b> Consult with peak representative bodies.	Department of Fisheries	Ongoing.
<b>MONITORING AND REPORTING OBJECTIVES</b>			
<b>Objective 8.</b> Report on the progress and review the Bycatch Action Plan.	<b>Action 8a.</b> Ensure that the progress and outcomes of the Bycatch Action Plan are reported.	Department of Fisheries	Annually within State of Fisheries Report.
	<b>Action 8b.</b> Review Bycatch Action Plan after two years.	Department of Fisheries	Two years from introduction of final Bycatch Action Plan.
<b>PUBLIC AWARENESS AND EDUCATION OBJECTIVES</b>			
<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.	<b>Action 9a.</b> 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*





## 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.

Commonwealth of Australia. (1998b) *Draft Recovery Plan for Marine Turtles in Australia*. Commonwealth Department of the Environment, Sport and Territories.

Department of Fisheries (in prep. a). *Report to the National Heritage Trust on the Shark Bay Prawn Trawl Bycatch Reduction Device Trial*.

Department of Fisheries (in prep. b). *A Review of Bycatch Issues Relevant to the Shark Bay Demersal Trawl Fisheries*. Department of Fisheries. Fish. Res. Rep. Fish. Dept. West. Aust.

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*.



**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	COLUMN TWO What do you think of this Objective/Action ?	COLUMN THREE Comments/Reasons for Disagreeing/Reasons for Agreement
<b>RESEARCH OBJECTIVES</b>		
<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	
<b>Action 1b.</b> Establish a Bycatch Journal System to be used across all fleet vessels.	1    2    3    4	
<b>Action 1c.</b> 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	

<b>COLUMN ONE OBJECTIVE/ACTION</b>	<b>COLUMN TWO What do you think of this Objective/Action ?</b>				<b>COLUMN THREE Comments/Reasons for Disagreeing/Reasons for Agreement</b>
<b>MANAGEMENT OBJECTIVES</b>					
<b>OBJECTIVE 2.</b> REDUCE THE BYCATCH OF LARGE ANIMALS AND SNAKES.	1	2	3	4	
<b>Action 2a.</b> Develop appropriate BRDs to exclude large objects from trawl nets.	1	2	3	4	
<b>Action 2b.</b> 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	
<b>Action 2c.</b> 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	
<b>Action 2e.</b> 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	
<b>Action 3a.</b> 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	
<b>Action 3b.</b> Develop and implement codes of conduct to increase the survivorship of undersized fish.	1	2	3	4	

<b>COLUMN ONE OBJECTIVE/ACTION</b>	<b>COLUMN TWO What do you think of this Objective/Action ?</b>				<b>COLUMN THREE Comments/Reasons for Disagreeing/Reasons for Agreement</b>
<b>OBJECTIVE 4.</b> REDUCE WASTAGE IN THE FISHERY RESULTING FROM THE MORTALITY OF INCIDENTAL CATCH.	1	2	3	4	
<b>Action 4a.</b> Implement a BRD incorporating an optimal fish exclusion device capable of excluding small fish from trawl nets.	1	2	3	4	
<b>Action 4b.</b> Continue to improve the BRDs used by the fleet in light of new data.	1	2	3	4	
<b>Action 4c.</b> 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	
<b>Action 5a.</b> 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	
<b>Action 5b.</b> 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	
<b>Action 5c.</b> Reduce the trawl-induced mortality of small fish caught in trawl nets (refer Objective 3).	1	2	3	4	
<b>Action 5d.</b> Investigate the possibility of reducing the length of the Shark Bay Prawn Managed Fishery season.	1	2	3	4	



<b>COLUMN ONE OBJECTIVE/ACTION</b>	<b>COLUMN TWO What do you think of this Objective/Action ?</b>				<b>COLUMN THREE Comments/Reasons for Disagreeing/Reasons for Agreement</b>
<b>OBJECTIVE 6.</b> TO ASSIST SKIPPERS AND CREW IN THE IMPLEMENTATION OF THE BYCATCH ACTION PLAN.	1	2	3	4	
<b>Action 6a.</b> Assist skippers and crews in the installation and operation of BRDs.	1	2	3	4	
<b>Action 6b.</b> Provide information to skippers and crew to aid in the identification of protected species.	1	2	3	4	
<b>Action 6c.</b> 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	
<b>Action 7c.</b> Consult with licensees, skippers and the Management Advisory Committee to discuss the management arrangements.	1	2	3	4	
<b>Action 7d.</b> Consult with peak representative bodies.	1	2	3	4	

<b>COLUMN ONE OBJECTIVE/ACTION</b>	<b>COLUMN TWO What do you think of this Objective/Action ?</b>				<b>COLUMN THREE Comments/Reasons for Disagreeing/Reasons for Agreement</b>
<b>MONITORING AND REPORTING OBJECTIVES</b>					
<b>OBJECTIVE 8.</b> REPORT ON THE PROGRESS AND REVIEW OF THE BYCATCH ACTION PLAN.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
<b>Action 8a.</b> Ensure that the progress and outcomes of the Bycatch Action Plan are reported.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
<b>Action 8b.</b> Review Bycatch Action Plan after two years.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
<b>PUBLIC AWARENESS AND EDUCATION OBJECTIVES</b>					
<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.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
<b>Action 9a.</b> Publicise and promote the management of bycatch in Shark Bay Prawn Managed Fishery.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	







## 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)
- No. 8** Report of the Rock Lobster Industry Advisory meeting of 27 January 1987. Chairman B. Bowen (1987)
- No. 9** Western Rock Lobster Industry Compensation Study. Arthur Young Services (1987)
- No. 10** Further Options for Management of the Shark Bay Snapper Fishery. P. Millington (1987)
- No. 11** The Shark Bay Scallop Fishery. L. Joll (1987)
- No. 12** Report of the Rock Lobster Industry Advisory Committee to the Hon Minister for Fisheries 24 September 1987. (1987)
- No. 13** A Development Plan for the South Coast Inshore Trawl Fishery. (1987)
- No. 14** Draft Management Plan for the Perth Metropolitan Purse Seine Fishery. P. Millington (1987)
- No. 15** Draft management plan, Control of barramundi gillnet fishing in the Kimberley. R. S. Brown (1988)
- No. 16** The South West Trawl Fishery Draft Management Plan. P. Millington (1988)
- No. 17** The final report of the pearling industry review committee. F.J. Malone, D.A. Hancock, B. Jeffriess (1988)
- No. 18** Policy for Freshwater Aquaculture in Western Australia. (1988)
- No. 19** Sport Fishing for Marron in Western Australia - Management for the Future. (1988)
- No. 20** The Offshore Constitutional Settlement, Western Australia 1988
- No. 21** Commercial fishing licensing in Western Australia. (1989)
- No. 22** Economics and marketing of Western Australian pilchards. SCP Fisheries Consultants Pty Ltd (1988)
- No. 23** Management of the south-west inshore trawl fishery. N. Moore (1989)
- No. 24** Management of the Perth metropolitan purse-seine fishery. N. Moore (1989)
- No. 25** Rock Lobster Industry Advisory Committee report to the Minister for Fisheries November 1988. (1989)
- No. 26** A report on marron fishing in Western Australia. Chairman Doug Wenn MLC (1989)
- No. 27** A review of the Shark Bay pearling industry. Dr D.A. Hancock, (1989)
- No. 28** Southern demersal gillnet and longline fishery. (1989)
- No. 29** Distribution and marketing of Western Australian rock lobster. P. Monaghan (1989)
- No. 30** Foreign investment in the rock lobster industry. (1989)
- No. 31** Rock Lobster Industry Advisory Committee report to the Hon Minister for Fisheries September 1989. (1989)
- No. 32** Fishing Licences as security for loans. P. Rogers (1989)
- No. 33** Guidelines for by-laws for those Abrolhos Islands set aside for fisheries purposes. N. Moore (1989)
- No. 34** The future for recreational fishing - issues for community discussion. Recreational Fishing Advisory Committee (1990)
- No. 35** Future policy for charter fishing operations in Western Australia. P. Millington (1990)

- No. 36** Long term management measures for the Cockburn Sound restricted entry fishery. P. Millington (1990)
- No. 37** Western rock lobster industry marketing report 1989/90 season. MAREC Pty Ltd (1990)
- No. 38** The economic impact of recreational fishing in Western Australia. R.K. Lindner, P.B. McLeod (1991)
- No. 39** Establishment of a registry to record charges against fishing licences when used as security for loans. P. Rogers. (1991)
- No. 40** The future for Recreational Fishing - Forum Proceedings. Recreational Fishing Advisory Committee (1991)
- No. 41** The future for Recreational Fishing - The Final Report of the Recreational Fishing Advisory Committee. Recreational Fishing Advisory Committee (1991)
- No. 42** Appendix to the final report of the Recreational Fishing Advisory Committee. (1991)
- No. 43** A discussion of options for effort reduction. Southern Gillnet and Demersal Longline Fishery Management Advisory Committee (1991)
- No. 44** A study into the feasibility of establishing a system for the buy-back of salmon fishing authorisations and related endorsements. (1991)
- No. 45** Draft Management Plan, Kimberley Prawn Fishery. (1991)
- No. 46** Rock Lobster Industry Advisory Committee, Chairman's report to the Minister (1992)
- No. 47** Long term management measures for the Cockburn Sound restricted entry fishery. Summary of submissions and final recommendations for management. P. Millington (1992)
- No. 48** Pearl oyster fishery policy guidelines (Western Australian Pearling Act 1990). Western Australian Fisheries Joint Authority (1992)
- No. 49** Management plan, Kimberley prawn fishery. (1992)
- No. 50** Draft management plan, South West beach seine fishery. D.A. Hall (1993)
- No. 51** The west coast shark fishery, draft management plan. D.A. Hall (1993)
- No. 52** Review of bag and size limit proposals for Western Australian recreational fishers. F.B. Prokop (May 1993)
- No. 53** Rock Lobster Industry Advisory Committee, Chairman's report to the Minister for Fisheries. (May 1993)
- No. 54** Rock Lobster Industry Advisory Committee, Management proposals for 1993/94 and 1994/95 western rock lobster season (July 1993)
- No. 55** Rock Lobster Industry Advisory Committee, Chairman's report to the Minister for Fisheries on management proposals for 1993/94 and 1994/95 western rock lobster seasons (September 1993)
- No. 56** Review of recreational gill, haul and cast netting in Western Australia. F. B. Prokop (October 1993)
- No. 57** Management arrangements for the southern demersal gillnet and demersal longline fishery 1994/95 season. (October 1993)
- No. 58** The introduction and translocation of fish, crustaceans and molluscs in Western Australia. C. Lawrence (October 1993)
- No. 59** Proceedings of the charter boat management workshop (held as part of the 1st National Fisheries Manager Conference). A. E. Magee & F. B. Prokop (November 1993)
- No. 60** Bag and size limit information from around Australia (Regulations as at September 1993) F. B. Prokop (January 1993)
- No. 61** Economic impact study. Commercial fishing in Western Australia Dr P McLeod & C McGinley (October 1994)
- No. 62** Management arrangements for specimen shell collection in Western Australia. J. Barrington, G. Stewart (June 1994)
- No. 63** Management of the marine aquarium fish fishery. J. Barrington (June 1994)
- No. 64** The Warnbro Sound crab fishery draft management plan. F. Crowe (June 1994)
- No. 65** Not issued
- No. 66** Future management of recreational gill, haul and cast netting in Western Australia and summary of submissions to the netting review. F.B. Prokop, L.M. Adams (September 1994)

- No. 67** Long term management strategies for the Western Rock Lobster Fishery. (4 volumes) Evaluation of management options Volume 1. B. K. Bowen (September 1994)
- No. 68** Long term management strategies for the Western Rock Lobster Fishery. (4 volumes) Economic efficiency of alternative input and output based management systems in the western rock lobster fishery, Volume 2. R.K. Lindner (September 1994)
- No. 69** Long term management strategies for the Western Rock Lobster Fishery. (4 volumes) A market-based economic assessment for the western rock lobster industry, Volume 3. Marec Pty Ltd (September 1994)
- No. 70** Long term management strategies for the Western Rock Lobster Fishery. (4 volumes) Law enforcement considerations, Volume 4. N. McLaughlan (September 1994)
- No. 71** The Rock Lobster Industry Advisory Committee Chairman's Report, October 1994, The Western Rock Lobster Fishery - Management proposals for the 1994/95 and 1995/96 seasons (November 1994)
- No. 72** Shark Bay World Heritage Area draft management plan for fish resources. D. Clayton (November 1994)
- No. 73** The bag and size limit review: new regulations and summary of submissions. F. Prokop (May 1995)
- No. 74** Report on future management options for the South West trawl limited entry fishery. South West trawl limited entry fishery working group (June 1995)
- No. 75** Implications of Native Title legislation for fisheries management and the fishing industry in Western Australia. P. Summerfield (February 1995)
- No. 76** Draft report of the South Coast estuarine fishery working group. South Coast estuarine fishery working group. (February 1995)
- No. 77** The Offshore Constitutional Settlement, Western Australia. H. Brayford & G. Lyon (May 1995)
- No. 78** The Best Available Information - Its Implications for Recreational Fisheries Management. Workshop at Second National Fisheries Managers Conference, Bribie Island Queensland. F. Prokop (May 1995)
- No. 79** Management of the Northern Demersal Scalefish Fishery. J. Fowler (June 1995)
- No. 80** Management arrangements for specimen shell collection in Western Australia, 1995. J. Barrington & C. Campbell (March 1996)
- No. 81** Management Options (Discussion Paper) for the Shark Bay Snapper Limited Entry Fishery. Shark Bay Snapper Limited Entry Fishery Working Group, Chaired by Doug Bathgate (June 1995)
- No. 82** The Impact of the New Management Package on Smaller Operators in the Western Rock Lobster Fishery R. Gould (September 1995)
- No. 83** Translocation Issues in Western Australia. Proceedings of a Seminar and Workshop held on 26 and 27 September 1994. F. Prokop (July 1995)
- No. 84** Bag and Size Limit Regulations From Around Australia. Current Information as at 1 July 1995. Third Australasian Fisheries Managers Conference, Rottne Island. F. Prokop (July 1995)
- No. 85** West Coast Rock Lobster Fishery Management Plan 1995 - Draft for Public Comment. Edited by M. Moran (August 1995)
- No. 86** A Review of Ministerial Policy Guidelines for Rock Lobster Processing in Western Australia from the Working Group appointed by the Minister for Fisheries and chaired by Peter Rich (December 1995)
- No. 87** Same Fish - Different Rules. Proceedings of the National Fisheries Management Network Workshop held as part of the Third Australasian Fisheries Managers Conference. F. Prokop
- No. 88** Balancing the Scales - Access and Equity in Fisheries Management - Proceedings of the Third Australasian Fisheries Managers Conference, Rottne Island, Western Australia 2 - 4 August 1995. Edited by P. Summerfield (February 1996)
- No. 89** Fishermen's views on the future management of the rock lobster fishery. A report. Prepared on behalf of the Rock Lobster Industry Advisory Committee by The Marketing Centre. (August 1995)
- No. 90** A report on the issues effecting the use of the Dampier Archipelago. Peter Driscoll, Landvision Pty Ltd (March 1996)



- No. 91** Shark Bay World Heritage Property - Management Paper for Fish Resources. Kevin A Francesconi (September 1996)
- No. 92** Pearling and Aquaculture in the Dampier Archipelago - Existing and Proposed Operations. A report for public comment. Compiled by Ben Fraser (September 1996)
- No. 93** Shark Bay World Heritage Property - Summary of Public Submissions to the Draft Management Plan for Fish Resources. Kevin A Francesconi (September 1996)
- No. 94** Rock Lobster Industry Advisory Committee Report - Management arrangements for the Western Rock Lobster Fishery for the 1997/98 season. Frank Prokop (May 1997)
- No. 95** Australian Salmon and Herring Resource Allocation Committee. P McLeod & F Prokop (*in press*)
- No. 96** Summary Report of the Freshwater Aquaculture Taskforce (FAT) by Chris Wells (*in press*)
- No. 97** (*in press*)
- No. 98** A Pricing Policy for Fisheries Agencies - Standing Committee on Fisheries and Aquaculture Management Committee. P Millington (March 1997)
- No. 99** Management of the South Coast Purse Seine Fishery. J Fowler, R Lenanton, Kevin Donohue, M Moran & D Gaughan
- No. 100** The Aquaculture of non-endemic species in Western Australia - Redclaw crayfish (*Cherax quadricarinatus*). Tina Thorne (June 1997)
- No. 101** Optimising the worth of the catch - Options and Issues. Marec Pty Ltd (September 1997)
- No. 102** Marine farm planning and consultation processes in Western Australia. Dave Everall (August 1997)
- No. 103** Future management of the aquatic charter industry in Western Australia by the Tour Operators Fishing Working Group (September 1997)
- No. 104** Management of the Houtman Abrolhos System (draft). Prepared by the Abrolhos Islands Management Advisory Committee in conjunction with Fisheries Western Australia (October 1997)
- No. 105** Plan for the Management of the Houtman Abrolhos Fish Habitat Protection Area (draft). Prepared by the Abrolhos Islands Management Advisory Committee in conjunction with Fisheries Western Australia (October 1997)
- No. 106** The impact of Occupational Safety and Health on the management of Western Australian Fisheries. Cameron Wilson (*in press*)
- No. 107** The Aquaculture of non-endemic species in Western Australia - Silver Perch (*Bidyanus bidyanus*). Tina Thorne (June 1997)
- No. 108** Issues affecting Western Australia's inshore crab fishery - Blue swimmer crab (*Portunus pelagicus*), Sand crab (*Ovalipes australiensis*). Cathy Campbell (September 1997)
- No. 109** Abalone Aquaculture in Western Australia. Cameron Westaway & Jeff Norriss (October 1997)
- No. 110** Proposed Voluntary Fishery Adjustment Scheme - South Coast Purse Seine Managed Fishery Report by Committee of Management (October 1997)
- No. 111** Management Options for Pilbara Demersal Line Fishing. Gaye Looby (December 1997)
- No. 112** Summary of Submissions to Fisheries Management Paper No. 108 - issues affecting Western Australia's inshore crab fishery. Compiled by Cathy Campbell (April 1998)
- No. 113** Western Rock Lobster Management - Options and Issues. Prepared by Kevin Donohue on behalf of the Rock Lobster Industry Advisory Committee. (June 1998)
- No. 114** A Strategy for the Future Management of the Joint Authority Northern Shark Fishery. Prepared by Tim Bray and Jo Kennedy. (June 1998)
- No. 115** Guidelines for granting Aquaculture Leases. Prepared by Fisheries WA, the Aquaculture Development Council & the Aquaculture Council of WA. (July 1998)
- No. 116** Future Management of the Aquatic Charter Industry in Western Australia - Final Report. By the Tour Operators Fishing Working Group (September 1998)
- No. 117** Management of the Houtman Abrolhos System. Prepared by the Abrolhos Islands Management Advisory Committee in conjunction with Fisheries Western Australia. (December 1998)
- No. 118** Plan for the Management of the Houtman Abrolhos Islands Fish Habitat Protection Area (Schedule 1)

- No. 119** Access to Wildstock for Aquaculture Purposes (not published)
- No. 120** Draft Management Plan for Sustainable Tourism at the Houtman Abrolhos Islands. Prepared by LeProvost, Dames and Moore for the Abrolhos Islands Management Advisory Committee in conjunction with Fisheries WA. (December 1998)
- No. 121** Future Directions for Tourism at the Houtman Abrolhos Islands - Draft for Public Comment. Prepared by LeProvost, Dames and Moore for the Abrolhos Islands Management Advisory Committee in conjunction with Fisheries WA. (December 1998)
- No. 122** Opportunities for the Holding/Fattening/Processing and Aquaculture of Western Rock Lobster (*Panulirus cygnus*). A discussion paper compiled by Fisheries WA. (November 1998)
- No. 123** Future directions for the Rock Lobster Industry Advisory Committee and the Western Rock Lobster Managed Fishery. A discussion paper prepared by Kevin Donohue on behalf of the Rock Lobster Industry Advisory Committee. (December 1998)
- No. 124** A Quality Future for Recreational Fishing in the Gascoyne. Proposals for Community Discussion. A five-year management strategy prepared by the Gascoyne Recreational Fishing Working Group (May 1999)
- No. 125** Changes to Offshore Constitutional Settlement Arrangements; North West Slope Trawl Fishery and Western Deepwater Trawl Fishery. A discussion paper by Fiona Crowe and Jane Borg (May 1999)[not published]
- No. 126** The South Coast Estuarine Fishery. A discussion paper by Rod Pearn and Tony Cappelluti. (May 1999)
- No. 127** The Translocation of Barramundi. A discussion paper by Makaira Pty Ltd.[July 1999]
- No. 128** Shark Bay Pink Snapper Managed Fisheries in WA
- No. 129** Review of the Western Australian Pilchard Fishery 12 - 16 April 1999. Prepared by K.L. Cochrane, Fisheries Resource Division, Food and Agriculture Division of the United Nations (November 1999)
- No. 130** Developing New Fisheries in Western Australia. A guide to applicants for developing fisheries Compiled by Lucy Halmarick (November 1999)
- No. 131** Management Directions for Western Australia's Estuarine and Marine Embayment Fisheries. A strategic approach to management (November 1999)
- No. 132** Summary of Submissions to Fisheries Management Paper No. 126 - The South Coast Estuarine Fishery - A Discussion Paper. Compiled by Rod Pearn (November 1999)
- No. 133** Abalone Aquaculture in Western Australia, A Policy Guideline (December 1999)
- No. 134** Management Directions for WA's Coastal Commercial Finfish Fisheries. Issues and proposals for community discussion (March 2000)
- No. 135** Protecting and Sharing Western Australia's Coastal Fish Resources. The path to integrated management. Issues and proposals for community discussion (March 2000)
- No. 136** Management Directions for WA's Recreational Fisheries (March 2000)
- No. 137** Aquaculture Plan for the Houtman Abrolhos Islands (April 2000)
- No. 138** Information on Quota Management of Rock Lobster Fisheries in South Australia, Tasmania and New Zealand. By Kevin Donohue and Eric Barker (May 2000)
- No. 139** A Quality Future for Recreational Fishing on the West Coast. Proposals for Community Discussion. A five-year management strategy prepared by the West Coast Recreational Fishing Working Group (June 1999)
- No. 140** Aquaculture Plan for the Recherche Archipelago, Western Australia. (June 2000)
- No. 141** Fish Protection Measures in Western Australia (July 2000) *in press*
- No. 142** Fisheries Environmental Management Plan for the Gascoyne Region (*in press*)
- No. 143** Western Rock Lobster. Discussion paper for seasons 2001/2002 and 2002/2003 (July 2000)
- No. 144** The Translocation of Brown Trout (*Salmo trutta*) and Rainbow Trout (*Oncorhynchus mykiss*) into and within Western Australia. Prepared by Jaqueline Chappell, contributions from Simon Hambleton, Dr Howard Gill, Dr David Morgan and Dr Noel Morrissy. (*in press*)
- 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)

- No. 147** Draft Bycatch Action Plan for the Shark Bay Prawn Managed Fishery - Full Report (April 2002)
- No. 148** Draft Bycatch Action Plan for the Shark Bay Prawn Managed Fishery - Summary Report (April 2002)
- No. 149** Final Plan of Management for the Lancelin Island Lagoon Fish Habitat Protection Area (March 2001)
- No. 150** Draft Plan of Management for the Cottesloe Reef Proposed Fish Habitat Protection Area (April 2001)
- No. 151** Inventory of the Land Conservation Values of the Houtman Abrolhos Islands (*in press*)
- No. 152** Guidelines for the Establishment of Fish Habitat Protection Areas (June 2001)
- No. 153** A Five-Year Management Strategy for Recreational Fishing on the West Coast of Western Australia. Final Report of the West Coast Recreational Fishing Working Group (August 2001)
- No. 154** A Five-Year Management Strategy for Recreational Fishing in the Gascoyne. Final Report of the Gascoyne Recreational Fishing Working Group (September 2001)
- No. 155** Plan of Management for the Cottesloe Reef Fish Habitat Protection Area (September 2001)
- No. 156** The Translocation Brown Trout (*Salmo Trutta*) and Rainbow Trout (*Oncorhynchus mykiss*) into and within Western Australia (*in press*)