



Australian Government

Department of the Environment, Water, Heritage and the Arts

Assessment of the
Western Australia Exmouth Gulf Prawn Managed Fishery

February 2008

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This document is an assessment carried out by the Department of the Environment, Water, Heritage and the Arts of a commercial fishery against the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition*. It forms part of the advice provided to the Minister for the Environment, Heritage and the Arts on the fishery in relation to decisions under Part 13A of the *Environment Protection and Biodiversity Conservation Act 1999*. The views expressed do not necessarily reflect those of the Minister for the Environment, Heritage and the Arts or the Australian Government.

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Table 1: Summary of the Western Australia (WA) Exmouth Gulf Prawn Managed Fishery (EGPMF)

<p>Publicly available information relevant to the fishery</p>	<ul style="list-style-type: none"> • WA <i>Fish Resources Management Act 1994</i> (FRM Act) • WA <i>Fish Resources Management Regulations 1995</i> (FRM Regulations) • <i>Exmouth Gulf Prawn Management Plan 1989</i> • <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) • Department of Environment and Heritage Assessment Report, January 2003 (2003 Assessment) • Department of Fisheries WA (DFWA), Application to Environment Australia for the Exmouth Gulf Prawn Fishery, April 2002 (2002 Submission) • DFWA, Application to the Department of the Environment and Water Resources on the Exmouth Gulf Prawn Fishery, October 2007 (2007 Submission) • DFWA, Ecologically Sustainable Development (ESD) Report Series No. 1 - Exmouth Gulf Prawn Fishery, January 2006 (ESD Report) • DFWA <i>State of the Fisheries Report 2003/04</i> • DFWA <i>State of the Fisheries Report 2004/05</i> • DFWA <i>State of the Fisheries Report 2005/06</i> • Kangas, M.I., Morrison, S., Unsworth, P., Lai, E., Wright, I. and Thomson, A. 2007. Development of biodiversity and habitat monitoring systems for key trawl fisheries in Western Australia. Final report to Fisheries Research and Development Corporation (FRDC) on Project No. 2002/038. Fisheries Research Report No. 160, Department of Fisheries, Western Australia, 334p. (FRDC Biodiversity Project).
<p>Area</p>	<p>The north-west side of the Exmouth Gulf in WA. The south-east side of the Gulf is closed to trawling. The entire fishery occurs within WA State waters.</p>
<p>Fishery status</p>	<p>Fully fished.</p> <p>The main performance measures for the EGPMF relate to maintenance of breeding stocks for each of the major target prawn species.</p> <p>In 2006, the target catch ranges for all species were met and the breeding stock indicators (catches within specified ranges) for king, endeavour, banana and coral prawns were all met. The spawning catch rate indicator for tiger prawns was slightly below the threshold level and therefore no further fishing took place after the spawning period.</p> <p>In 2005, the breeding stock indicators for each species were also met. The zero catch recorded for banana prawns in 2005 and 2006 corresponded to low rainfall years and was therefore not unexpected.</p>
<p>Target Species</p>	<p>Western king prawns (<i>Penaeus latisulcatus</i>), brown tiger prawns (<i>P. esculentus</i>), endeavour prawns (<i>Metapenaeus spp.</i>) and banana prawns (<i>P. merguensis</i>).</p> <p>Information on the biology of the target species can be found in the ESD</p>

	Report for the EGPMF, available on DFWA's website.
Byproduct Species	<p>Coral prawns, blue swimmer crab, squid, bugs and cuttlefish. Retention of sharks and rays is not allowed.</p> <p>The introduction of mandatory bycatch reduction devices (in the form of grids) in 2003 and fish escapement devices in 2005 is likely to have significantly reduced the number of sharks and finfish taken by trawl.</p>
Gear	<p>Otter trawl gear: the fishery as a whole is subject to a maximum head rope allocation. However, the gear configuration package (net and board sizes) permitted within this total allocation are under review, with vessels operating for the last few seasons under an exemption allowing the use of 'quad gear' (four smaller nets) rather than the standard twin 7.5 fathom nets. This has resulted in a reduction in the number of boats with the headrope allocation redistributed among the remaining boats.</p> <p>Following trials over previous fishing seasons, the use of quad gear, unitization of head rope length, and removal of the 375 boat unit rule are to be formalised by an amendment to the <i>Exmouth Gulf Prawn Management Plan 1989</i>.</p> <p>All vessels are required to fish with a bycatch reduction device (BRD) and a secondary BRD or fish escapement device (FED) in each net.</p>
Season	<p>Opening and closing dates vary each year depending on environmental conditions, moon phase and predictions of tiger prawn recruitment from pre-season, fishery-independent surveys.</p> <p>Management arrangements in recent seasons have provided for a maximum of 200 fishing nights with a minimum of 28 non-fishing nights for moon closures (ie. four nights each full moon).</p> <p>In 2006, the EGPMF season commenced on 24 April and closed on 24 November (157 nights). There were also spatio-temporal closures during the early part of the season (April–July) to avoid fishing on small prawns.</p> <p>In 2005, the EGPMF season commenced on 17 April and closed on 24 November (173 nights).</p>
Commercial harvest	<p>The total landings of major penaeids for the 2006 season were 899 t, comprising 442 t of king prawns, 258 t of tiger prawns and 199 t of endeavour prawns. The total landings were lower than in the last two seasons, but within the target catch range.</p> <p>The total landings of major penaeids for the 2005 season were 1,068 tonnes (t), comprising 449 t of king prawns, 416 t of tiger prawns and 203 t of endeavour prawns. The total landings and individual landings were all within the target catch ranges.</p> <p>In 2004 and 2003, the total catch for target species was 1,347 t and 1,089 t respectively.</p> <p>In 2006, recorded landings of byproduct included 32 t of coral prawns, 18 t of blue swimmer crab, 10 t of squid, 2 t of bugs and 1.5 t of cuttlefish.</p>

Value of commercial harvest	In 2006, the estimated annual value (to fishers) was \$10 million.
Take by other sectors	No significant take of target species by recreational, indigenous or other sectors.
Commercial licences issued	<p>There are 16 boat licences in the EGPMF, however, only 12 boats operated during 2006. The total allocation of net head rope length has been set at 240 fathoms, based on the number of boat licenses (16) towing 15 fathoms of net head rope each.</p> <p>The ongoing restructure of the fleet to improve economic efficiency (i.e. trialling of quad gear and different net sizes) aims to utilise all the net head rope allocation, while reducing the number of vessels operating in the fishery.</p> <p>In 2004, 2005 and 2006, the total head rope length used was 229 fathoms, down from 234 fathoms in 2003.</p>
Management arrangements	<p>The EGPMF is managed under the <i>Exmouth Gulf Prawn Management Plan 1989</i>, EGPMF Licences, FRM Regulations and FRM Act.</p> <p>Management of the EGPMF is based on input controls which include limited entry, seasonal and area openings and closures, moon closures, gear controls and a fleet-wide vessel monitoring system.</p> <p>The sustainable management of target stocks (utilizing pre-season surveys to predict prawn recruitment) is further strengthened through research surveys conducted during the season to identify any changes in prawn distribution, abundance and size composition. These surveys enable the fishery to respond rapidly to resource fluctuations to optimise catch and size grades while still providing sustainable stock management. For example, in 2005 and 2006, spatio-temporal closures were put in place during the early part of the season to avoid fishing on small prawns.</p> <p>Management guidelines first introduced in 2002 prescribe a mandatory closure of the tiger prawn spawning area when the tiger prawn catch rate (using quad gear) falls to below 19 kg/hr or on 1 August, whichever is sooner. From 1 November, after the main spawning period, the catch rate threshold level is reduced to 14kg/hr, and in some circumstances may not reopen if the stock level is low.</p> <p>Calibration of catch rates between twin and quad gear was undertaken in 2005/06 to measure changes in fishing efficiency.</p>
Export	Major markets for tiger prawns are Japan and Taiwan. Australia, Europe, the United States of America and Taiwan are the major markets for western king prawns. Endeavour prawns are mainly sold in Australia and New Zealand.
Bycatch	<p>All vessels are required to fish with a BRD and FED in each net. In addition, many boats are using hoppers (in-water sorting systems) which improve bycatch survival.</p> <p>Results of the FRDC Biodiversity Project, examining the biodiversity of bycatch species in trawled and untrawled areas of Exmouth Gulf,</p>

	<p>indicate that the faunal composition was generally similar in trawled and untrawled areas. The results of the project suggest that monitoring the proportion of the area trawled is likely to be a reliable indicator of the effect of this activity on the sustainability of bycatch species and biodiversity.</p>
<p>Interaction with Protected Species¹</p>	<p>While protected species including whales, dolphins, dugongs, turtles and sea snakes occur in the area, only sea snakes are seen regularly in the trawl catches.</p> <p>Due to the low speeds at which the trawlers operate (~ 4 knots), whales, dolphins and dugongs are likely to be able to actively remove themselves from the path of the vessel and trawl gear.</p> <p>The survivorship of marine turtles and sea snakes that may interact with trawl gear has been greatly improved by the introduction of mandatory BRDs in 2003 and FEDs in 2005. In 2006, one turtle was reported as being caught in nets during 2006 – survivorship unknown. No turtles were reported in 2005. Two turtles were reported as being caught in nets and were returned alive in 2004.</p> <p>The Research logbooks completed by licence holders within the EGPMF include provisions to report any interactions with protected species, which are then provided to DFWA.</p> <p>Under sections 199, 214, 232 and 256 of the EPBC Act, persons who interact with a protected species must report that interaction within seven days of the incident occurring to DEWHA.</p> <p>A Memorandum of Understanding between DFWA and DEWHA for the Reporting of Fisheries Interactions with Protected Species (Reporting MOU) is currently being negotiated to streamline reporting requirements for interactions with protected species to assist fishers in meeting their requirements under the EPBC Act. As such, the MOU reduces the administrative reporting burden on individual fishers and provides for regular reporting of protected species interactions.</p> <p>Reporting requirements are included as a standing item on the agenda for annual pre-season briefings.</p>
<p>Ecosystem Impacts</p>	<p>The EGPMF has the potential to cause ecosystem impacts through direct physical impacts of trawl gear and trophic impacts through the removal of target species, discarding and translocation.</p> <p>The trophic impacts are likely to be low due to the high natural mortality and variable biomass levels of prawns, and the extent of non-trawled areas in the fishery. Similarly, direct physical impacts are managed through area closures ensuring over 60% of the trawl area remains untrawled. Additionally, many specific habitats, such as hard corals and seagrass beds, do not overlap spatially with the predominantly mud and sand habitats of the main trawling grounds.</p> <p>The management tools used in the EGPMF, such as limited entry,</p>

¹ For the purposes of this assessment report ‘protected species’ means all species listed under Part 13 of the EPBC Act, including whales and other cetaceans and threatened, marine and migratory species.

	seasonal and area openings and closures, gear controls and vessel monitoring system assist the fishery in implementing sufficiently precautionary management measures to minimise the impact on the ecosystem.
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Table 2: Progress in implementation of recommendations made in initial assessment of the EGPMF

Recommendation	Progress	Recommended Action
<p>1. The ESD Report, including all performance measures, responses and information requirements, should be formally incorporated into the management regime and decision making process within one year, with a clear timeframe for implementation.</p>	<p>DFWA have formally published the ESD Report for the EGPMF as part of its ESD report series (http://www.fish.wa.gov.au/docs/esd/index.php?0605). The ESD Report provides a comprehensive overview of the fishery and details operational objectives, performance measures, indicators, management responses and information requirements used to assess the performance of the EGPMF.</p> <p>DFWA continues to report against performance measures detailed in the ESD report in its annual <i>State of the Fisheries Report</i>, which is tabled in the WA Parliament under legislative requirements of the FRM Act.</p> <p>DFWA’s 2002 Submission detailed a review period of five years for the ESD Report. The intent at that time was to coincide with the next DEWHA assessment of the fishery in 2008. This review has not occurred to date, which DEWHA consider needs to be addressed as a matter of priority, to ensure the objectives and performance measures for the fishery remain relevant and appropriate.</p>	<p>Met and Ongoing (Recommendation 4, Table 4).</p> <p>Within 18 months, DEWHA recommend DFWA review the current levels of risk for all components of the fishery, in a transparent manner. Where appropriate, DFWA will update or develop new objectives, indicators, performance measures, management responses and information requirements, ensuring they remain adequate and maintain precautionary management principles in their application.</p>
<p>2. The ESD Report should be amended to incorporate time frames for all management responses to breaches of performance measures.</p>	<p>The main performance measures for the EGPMF relate to maintenance of target species breeding stocks. The fishery has developed real time management responses to ensure sustainable stock management and enhance economic return to the fishery, through research surveys conducted during, pre- and post-season. Catch rates are also monitored in real time to inform management for spatial and temporal area closures.</p>	<p>DEWHA considers that this recommendation has been met.</p>

	The annual pre-season DFWA-industry meetings to set catch rate thresholds and fishing arrangements for the coming year provide opportunity to review and address management responses to breaches in performance measures.	
3. A mechanism should be developed to enable the amendment of management arrangements to respond to new information, or future Government plans and policies.	<p>Section 65 of the FRM Act provides for the amendment of management plans.</p> <p>The <i>Exmouth Gulf Prawn Management Plan 1989</i> also provides the ability to alter the management arrangements (season opening and closing dates, area closures, etc.) both from year to year, and during the fishing season, according to what is considered to be in the better interests of the EGPMF.</p>	DEWHA considers that this recommendation has been met.
4. EA ² should be informed of any changes to the management plan or managerial commitments in the ESD report.	<p>There have been no substantive amendments to the legislated management arrangements for the EGPMF since the 2003 assessment.</p> <p>A FRM Act exemption has allowed EGPMF operators to trial the use of ‘quad gear’ (four smaller nets) rather than the standard twin 7.5 fathom nets. Another exemption restricts vessels greater than 375 boat units from operating within the EGPMF.</p> <p>The impact of changes to fishing practices over time, in terms of ecological sustainability, on target, byproduct and bycatch species or the marine environment requires monitoring. However, in the case of the move to quad gear, it is acknowledged that a conservative 10% reduction in total headrope now applies across the fishery to account for the increased efficiency of such gear. Catch rate cut of thresholds have also been adjusted for</p>	Met and ongoing (Recommendation 2 and 6 , Table 4).

² Environment Australia (EA), now the Department of the Environment, Water, Heritage and the Arts.

	<p>quad gear and regular fishery independent surveys are undertaken.</p> <p>BRDs have been used by operators in the EGPMF since 2003, with FEDs being made mandatory in 2005.</p>	
<p>5. Opportunity should be provided to conservation, community and recreational fishing interests to participate in the processes of the main advisory body to the WA Fisheries Minister for this fishery. DFWA should also ensure that any relevant indigenous interests are considered through appropriate consultative mechanisms.</p>	<p>The Joint Trawl Management Advisory Committee (MAC) was established in January 2002 to provide advice to the WA Fisheries Minister on matters relating to the Exmouth Gulf Prawn, Shark Bay Prawn and Shark Bay Scallop Managed Fisheries. The MAC meets 1 to 2 times per year.</p> <p>Currently, the structure of the MAC is as follows:</p> <ul style="list-style-type: none"> • Independent chair • 8 members with expertise in the commercial prawn and scallop fishing industry • 1 member with recreational fishing sector expertise • 1 member with community sector expertise • 1 member with conservation sector expertise • Chief Executive Officer (ex officio) or nominee <p>Commercial, conservation and recreational interests are included in the consultative process for the EGPMF through membership of the MAC. Currently, the committee does not include a specific position for a member of the indigenous sector. However, where relevant or appropriate, indigenous interests are invited to participate in the MAC consultation process.</p>	<p>DEWHA encourages DFWA to continue to provide opportunity for conservation, indigenous, recreational fishing and community groups to participate in the processes of the MAC.</p>
<p>6. Permitted byproduct should be limited to species currently harvested with a robust system developed to add or remove species as appropriate. Suitable</p>	<p>A draft Fisheries Management Paper titled “Managing the Take of Byproduct in Managed Fisheries in Western Australia” is working towards meeting this recommendation.</p> <p>It is proposed to manage the take of byproduct in</p>	<p>Met and ongoing (Recommendation 7, Table 4).</p>

<p>catch triggers should be developed to ensure any change in targeting behaviour can be detected and addressed as it occurs. Management responses should be clarified, with timeframes for implementation, to address such changes, so that the management arrangements are able to minimise threats to byproduct species.</p>	<p>managed fisheries by including a schedule within the management plan which specifies a list of byproduct species historically caught in the EGPMF and a corresponding number/catch limit. The Minister has given his in-principal support for this strategy to deal with the take of byproduct.</p> <p>DFWA’s Research Division is in the process of compiling the historical byproduct catch data for all of the trawl fisheries in order to produce schedules specific to each fishery.</p> <p>Results from the FRDC Biodiversity Project (see Recommendation 7, Table 2) have also provided an inventory of bycatch (including byproduct) species caught at fixed sites throughout Exmouth Gulf and have provided information on the spatial distribution of byproduct species. The final report on this project is available on the DFWA website.</p>	
<p>7. DFWA should participate in any cross-jurisdictional activities regarding relevant target and byproduct species, including squid.</p>	<p>DFWA currently participates in various cross-jurisdictional activities in order to ensure sustainability of the State’s fish stocks. For example, DFWA regularly engages DEWHA regarding interaction with protected species and also consults with the Department of Agriculture, Forestry and Fisheries regarding the Offshore Constitutional Settlement and with the Australian Fisheries Management Authority on cross-jurisdictional fishery issues.</p> <p>DFWA has not had the need to consider any cross-jurisdictional activities regarding species taken or activities within the EGPMF since the 2003 assessment.</p>	<p>Met and ongoing. DEWHA encourage the participation in cross-jurisdictional activities where appropriate, to ensure the ongoing ecological sustainability of the EGPMF.</p>
<p>8. Ongoing monitoring should</p>	<p>The recently completed FRDC Biodiversity Project has</p>	<p>Met and ongoing (Recommendation 7, Table 4).</p>

<p>be implemented sufficient to identify long-term trends in bycatch between fished and unfished areas to ensure that information used in the risk assessment for the fishery remains based on accurate and current data.</p>	<p>progressed this recommendation with the final report now available on the DFWA website.</p> <p>DFWA advise that results indicate that no statistical significance was found for pooled data between trawled and untrawled sites with respect to fish and invertebrate abundance, species richness, evenness or diversity. There is some indication that in high trawl effort areas in Exmouth Gulf, faunal abundance is lower than for no, low or medium effort trawl areas. The abundance in these three other trawl categories was similar. A highly significant seasonal reduction in abundance was observed for invertebrate species and this was a pattern observed at all sites sampled. There was no significant seasonal decline for fish species abundance although there was a seasonal decline in fish species richness.</p> <p>One of the main objectives of this study was to compare the faunal composition between trawled and untrawled areas and if the faunal composition was similar, then it was highly likely that closed areas act as refuges for the majority of those species impacted by trawling. Faunal composition was similar in trawled and untrawled areas in general and therefore it is sufficient that the principal form of monitoring in Exmouth Gulf is of the extent of the trawled areas. The percentage of area trawled should not exceed that observed in recent years (20 – 40% of the total area of the fishery).</p>	
<p>9. The importance of specific areas and habitats to applicable bycatch species during all stages of their life cycle should be considered when applying</p>	<p>The recently completed FRDC Biodiversity Project has progressed this recommendation with the final report now available on the DFWA website.</p> <p>DFWA advise that results indicate the substantial permanent area closures and other temporal closures</p>	<p>Met and ongoing (Recommendation 7, Table 4).</p>

<p>the results of the biodiversity research to management arrangements.</p>	<p>present in the EGPMF provide protection to habitats important for key life history stages of the majority of bycatch species caught.</p> <p>In addition, the project identified that the 10-20 most common species of fish and invertebrates could be used as indicator species (for trends in abundance and diversity measures) in Exmouth Gulf. These are all relatively short-lived, abundant and widespread in both trawled and untrawled areas.</p>	
<p>10. All protected species interactions by commercial operations should be reported and coupled with an education program to ensure industry has the capacity to make accurate reports.</p>	<p>The Research logbooks completed by EGPMF licence holders include provisions to report any interactions with protected species, which are provided to DFWA.</p> <p>Under sections 199, 214, 232 and 256 of the EPBC Act, persons who interact with a protected species must report that interaction within seven days of the incident occurring to DEWHA.</p> <p>A Reporting MOU is currently being negotiated to streamline reporting requirements for interactions with protected species to assist fishers in meeting their requirements under the EPBC Act. As such, the Reporting MOU reduces the administrative reporting burden on individual fishers and provides for regular reporting of protected species interactions.</p> <p>Reporting requirements are included as a standing item on the agenda for annual DFWA-industry pre-season briefings, and fishers' are also given a Protected Marine Species Identification Guide to enable accurate reporting.</p>	<p>Met and ongoing.</p>

Table 3: DEWHA assessment of the EGPMF against the requirements of the EPBC Act related to decisions made under Part 13A

Please Note – the table below is not a complete or exact representation of the EPBC Act. It is intended as a summary of relevant sections and components of the Act to provide advice on the fishery in relation to decisions under Part 13A. A complete version of the EPBC Act can be found on the DEWHA website.

Part 13A

Section 303DC Minister may amend list	DEWHA assessment of the EGPMF
<p>(1) Minister may, by instrument published in the Gazette, amend the list referred to in section 303DB (list of exempt native specimens) by:</p> <ul style="list-style-type: none"> (a) including items in the list; (b) deleting items from the list; or (c) imposing a condition or restriction to which the inclusion of a specimen in the list is subject; or (d) varying of revoking a condition or restriction to which the inclusion of a specimen in the list is subject; or (e) correcting an inaccuracy or updating the name of a species. 	
<p>(3) Before amending the list referred to in section 303DB (list of exempt native specimens), the Minister:</p> <ul style="list-style-type: none"> (a) must consult such other Minister or Ministers as the Minister considers appropriate; and (b) must consult such other Minister or Ministers of each State and self-governing Territory as the Minister considers appropriate; and (c) may consult such other persons and organisations as the Minister considers appropriate. 	<p>The public comment period on the DFWA submission sought comment on the annual reports and submission for the EGPMF and provided sufficient opportunity for consultation with other persons and organisations.</p> <p>A letter to the WA Fisheries Minister, the Hon Jon Ford MLC advises him of the intention to declare the fishery exempt from the export provisions of the EPBC Act.</p>
<p>(5) A copy of an instrument made under section 303DC is to be made available for inspection on the Internet.</p>	<p>The instrument for the EGPMF made under sections 303DC will be gazetted and made available on the DEWHA website.</p>

Section 303FR Public consultation	DEWHA assessment of the EGPMF
<p>(1) Before making a declaration under section 303FN, the Minister must cause to be published on the Internet a notice:</p> <ul style="list-style-type: none"> (a) setting out the proposal to make the declaration; and (b) setting out sufficient information to enable persons and organisations to consider adequately the merits of the proposal; and (c) inviting persons and organisations to give the Minister, within the period specified in the notice, written comments about the proposal. 	<p>Under the EPBC Act, a decision to amend the List of Exempt Native Specimens (LENS) does not require a public consultation period. However, a public notice, which set out the proposal to grant export approval to the EGPMF and included the submission and annual reports for the EGPMF was released for public comment which closed on 4 December 2007. No public comments were received.</p>
<p>(3) In making a decision about whether to make a declaration under section 303FN, the Minister must consider any comments about the proposal to make the declaration that were given in response to the invitation in the notice.</p>	<p>No public comments were received on the submission.</p>

Part 16

Section 391 Minister must consider precautionary principle in making decisions	DEWHA assessment of the EGPMF
<p>(1) The Minister must take account of the precautionary principle in making a decision under section 303DC and/or section 303FN, to the extent he or she can do so consistently with the other provisions of this Act.</p>	<p>The precautionary principle must be considered when making a decision to include specimens on the LENS.</p>
<p>(2) The precautionary principle is that lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage.</p>	

Objects of Part 13A

- (a) to ensure that Australia complies with its obligations under CITES and the Biodiversity Convention;
- (b) to protect wildlife that may be adversely affected by trade;
- (c) to promote the conservation of biodiversity in Australia and other countries;

- (d) to ensure that any commercial utilisation of Australian native wildlife for the purposes of export is managed in an ecologically sustainable way;
- (e) to promote the humane treatment of wildlife;
- (f) to ensure ethical conduct during any research associated with the utilisation of wildlife; and
- (h) to ensure the precautionary principle is taken into account in making decisions relating to the utilisation of wildlife.

Final recommendations to DFWA for the EGPMF.

The material submitted by DFWA indicates that the EGPMF operates in accordance with the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition*. DEWHA considers that the fishery is well managed and unlikely to have an unacceptable or unsustainable impact on the environment in the medium term. DEWHA recognises that gear controls such as the mandatory use of bycatch reduction and fish escapement devices, seasonal and area closures are conservative and suggest that the fishery is being managed in an ecologically sustainable way.

In making its assessment, DEWHA considers that the range of management measures are sufficient to ensure that the fishery is conducted in a manner that does not lead to over-fishing and that stocks are not currently overfished. Taking into account the real time monitoring, spatial and temporal closures based on spawning stock, data collection systems and defined acceptable catch ranges, DEWHA considers that fishing operations are managed to minimise their impact on the structure, productivity, function and biological diversity of the ecosystem. Management of the fishery has a history of reacting appropriately to threats to sustainability and DEWHA is confident that DFWA will continue to provide this high quality management.

DEWHA is satisfied that the fishery will not be detrimental to the survival or conservation status of the taxon to which it relates in the medium term. Similarly, it is not likely to threaten any relevant ecosystem in the medium term. DEWHA also considers that under the management plan operators are required to take all reasonable steps to avoid the killing or injuring of protected species, and the level of interaction under current fishing operations is low. To contain and minimise the risks in the longer term the recommendations listed below have been made. DEWHA believes that product taken in the fishery should be exempt from the export controls of Part 13A of the EPBC Act, with that exemption to be reviewed in five years.

Recommendations are provided below with a brief explanation of the related issue/intent. Unless a specific time frame is provided in the recommendation each recommendation should be addressed within the life of the declaration (five years).

Table 4: EGPMF Assessment – Summary of Issues and Recommendations, February 2008

	Issue	Recommendation
1	<p><u>General Management</u></p> <p>Export decisions relate to the arrangements in force at the time of the decision. In order to ensure that these decisions remain valid and export approval continues uninterrupted, DEWHA needs to be advised of any changes that are made to the management regime and make an assessment that the new arrangements are equivalent or better, in terms of ecological sustainability, than those in place at the time of the original decision. This includes operational and legislated amendments that may affect sustainability of the target species or negatively impact on by-product, bycatch, protected species or the ecosystem.</p> <p>In its 2007 submission, the Department of Fisheries Western Australia (DFWA) advised of a pending amendment to the management plan associated with a change in the fishing gear used in the EGPMF. Where appropriate, DFWA should keep DEWHA informed of the progress of this amendment to ensure the original export decision remains valid.</p>	<p>Recommendation 1: Operation of the fishery will be carried out in accordance with the <i>Exmouth Gulf Prawn Management Plan 1989</i> made under the <i>Western Australian Fish Resources Management Act 1994</i>.</p> <p>Recommendation 2: DFWA to advise DEWHA of any intended material change to the EGPMF legislated management regime and management arrangements that could affect the criteria on which EPBC Act decisions are based.</p>
2	<p><u>Annual reporting</u></p> <p>It is important that reports be produced and presented to DEWHA annually in order for the performance of the fishery and progress in implementing the conditions and recommendations in this report and other managerial commitments to be monitored and assessed throughout the life of the declaration.</p> <p>Annual reports should include: a description of the fishery; management arrangements in place; research and monitoring outcomes; recent catch data for all sectors of the fishery; status of target stock; interactions with protected species; impacts of the fishery on the ecosystem in which it operates; and information outlining progress in implementing conditions and recommendations resulting from the previous</p>	<p>Recommendation 3: DFWA to produce and present reports to DEWHA annually as per Appendix B of the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i>.</p>

	<p>accreditation of the fishery (for a complete description of annual reporting requirements, see Appendix B of the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i> available from the DEWHA website at http://www.environment.gov.au/coasts/fisheries/publications/guidelines.html).</p> <p>In addition to DFWA's annual <i>State of the Fisheries Report</i>, DFWA will submit an annual report providing updated, real-time responses to management issues and information on the progress against recommendations of the 2008 WTO declaration. These reports will be provided in March each year (starting March 2009).</p>	
3	<p><u>Comprehensive review of risk levels for all components of the fishery</u></p> <p>DFWA have formally published an Ecologically Sustainable Development Report for the EGPMF (ESD Report) as part of its ESD report series (http://www.fish.wa.gov.au/docs/esd/). The ESD Report provides: a comprehensive overview of the fishery and details operational objectives, performance measures, indicators, management responses and information requirements used to assess the performance of the EGPMF. Detailed justifications for the levels of risk chosen during the risk assessment workshop in 2001 and methods used are also documented in the report. The ESD Report also states that a broad review of the ESD Report and its component sections shall be undertaken every five years that will encompass all aspects of the fishery.</p> <p>Given the length of time since the risk assessment and subsequent development of the ESD Report, DEWHA recommend DFWA identify and review the risk levels for all components of the fishery and provide for appropriate consultation with relevant stakeholders (including recreational, indigenous, conservation and community groups) by August 2009. DFWA should then develop and implement appropriate measures to address and mitigate identified risks and maintain precautionary management principles to ensure the ongoing ecological sustainability of the EGPMF. Where appropriate, DFWA shall update or develop new objectives, indicators,</p>	<p>Recommendation 4: By August 2009, DFWA to identify and review risk levels for target species, byproduct, bycatch (including protected species) and impacts on the environment for the EGPMF. DFWA to implement appropriate measures to ensure identified risks are addressed and minimised.</p>

	<p>performance measures, management responses and information requirements.</p> <p>Details and results of the review should be documented and made publicly available, to clearly articulate and justify management arrangements in place for the fishery.</p> <p>The review of risk levels should consider the impacts of the fishery, in context of the proposed changes to gear configurations including the use of quad gear, unitization of head rope length, and removal of the 375 boat unit rule. Results trialling these different configurations should be available for the review.</p>	
4	<p><u>Bycatch Action Plan</u></p> <p>DFWA's Bycatch Action Plan (BAP) for the EGPMF is still yet to be developed. DEWHA recommends that this document be developed and released for public comment, finalised and made publicly available as part of its implementation for the fishery.</p> <p>DEWHA considers the ongoing implementation of the BAP, including public reporting against its progress, to be a key objective for the fishery to ensure its impacts on bycatch (including protected species) and the marine environment are minimised.</p>	<p>Recommendation 5: By December 2009, DFWA to develop, finalise and implement the Bycatch Action Plan for the EGPMF, including ongoing review and progress reporting on its implementation.</p>
5	<p><u>Long-term trends in bycatch diversity and abundance</u></p> <p>In the 2003 assessment of the EGPMF, recommendations were made for DFWA to implement an ongoing monitoring program to identify long-term trends in bycatch in trawled and untrawled areas of the fishery, and understand the importance of specific areas and habitats to applicable bycatch species. Results of the FRDC Biodiversity Project that addresses this issue are now available on the DFWA website and suggest little difference between trawled and untrawled sites, with respect to fish and invertebrate abundance, species richness, evenness or diversity.</p> <p>DEWHA note DFWA's commitment to increasing the current knowledge on bycatch in the EGPMF. DEWHA recommends DFWA continues to collect valuable information</p>	<p>Recommendation 6: In conjunction with Recommendations 4 and 5, DFWA to develop and implement a program to identify long-term trends in bycatch diversity and abundance in the Exmouth Gulf.</p>

	<p>on the impact of the fishery on bycatch levels and species composition to identify long term trends in bycatch biodiversity, inform the ecological risk levels for bycatch species and support the development and implementation of the BAP for the fishery.</p>	
6	<p><u>Managing byproduct species</u></p> <p>A recommendation was made in the 2003 assessment of the EGPMF for DFWA to ensure a system was in place to better manage the take of byproduct species, detect changes in targeting behaviour and, where appropriate, develop suitable performance indicators, measures and management responses to minimise threats to byproduct species.</p> <p>DFWA propose to manage the take of byproduct in managed fisheries by including a schedule within the respective management plans which specifies a list of byproduct species historically caught and a corresponding number/catch limit. The WA Fisheries Minister has given his in-principal support for this strategy to deal with the take of byproduct.</p> <p>Results from the FRDC Biodiversity Project are also supplementing the inventory of bycatch specimens caught in the EGPMF being collated by DFWA's Research Division.</p> <p>DEWHA notes and commends the introduction of BRDs into the fishery which may help reduce the take of large byproduct and bycatch species.</p>	<p>Recommendation 7: By December 2010, DFWA to implement a strategy for managing the take of byproduct in the EGPMF.</p>

Acronyms

BAP	Bycatch Action Plan
BRD	Bycatch Reduction Device
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DEWHA	Department of the Environment, Water, Heritage and the Arts
DFWA	Department of Fisheries Western Australia
EGPMF	Exmouth Gulf Prawn Managed Fishery
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
ESD	Ecologically Sustainable Development
FED	Fish Escapement Device
FRDC	Fisheries Research and Development Corporation
FRM Act	<i>Fish Resources Management Act 1994</i>
FRM Regulations	<i>Fish Resources Management Regulations 1995</i>
LENS	List of Exempt Native Specimens
MAC	Management Advisory Committee
Reporting MOU	Reporting of Fisheries Interactions with Protected Species
WA	Western Australia