



Department of Fisheries
Government of Western Australia



**APPLICATION TO THE DEPARTMENT OF THE ENVIRONMENT AND
WATER RESOURCES ON THE PILBARA FISH TRAWL INTERIM
MANAGED FISHERY**

*Against the Guidelines for the Ecologically Sustainable Management of
Fisheries - 2007*

JULY 2007

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1. BACKGROUND

The purpose of this report is to update the Department of the Environment and Water Resources (DEW) on the progress of the Pilbara Fish Trawl Interim Managed Fishery (the Fishery) against its Wildlife Trade Operation (WTO) certification conditions, from 1 January to 30 June 2007. As a requirement of the Fishery's WTO certification, the Department of Fisheries WA has provided quarterly (and more recently bi-annual) reports to DEW on the progress of the Fishery against each of the WTO certification conditions. Additional copies of these reports are available upon request.

This report, along with previous quarterly reports, aims to enable the re-assessment of the Fishery against the *Guidelines for Ecologically Sustainable Management of Fisheries*, under Part 13 and 13A of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Previous Assessment

On 1 December 2004, DEW declared the Fishery a WTO under the *EPBC Act 1999*. In June 2005, the declaration was extended until 1 August 2006 giving the Department and industry just over 12 months to meet a set of conditions. On 28 July 2006, the declaration was extended again, to 1 December 2007, bringing the Fishery to the maximum (3 year) cumulative period under the WTO.

Re- Assessment Process

The Fishery's WTO certification is conditional on the Fishery reducing the bycatch of listed/protected species, particularly dolphins. This report provides an update to DEW on the progress of the Fishery against those conditions from 1 January to 30 June 2007.

The documentation attached to enable the re-assessment of the Fishery consists of:

1. a summary of the key changes in the Fishery since 2004;
2. a report addressing the progress of the Fishery against each of the WTO conditions;
3. a copy of the Fishery's annual reports, published in the annual [State of the Fisheries Report](#) over the past three years (Appendix 2); and
4. ancillary information to assist in the re-assessment process.

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2. SUMMARY OF KEY CHANGES IN THE FISHERY SINCE 2004

There has been continued progress towards reducing the interactions between the Fishery and protected species, including:

- The Natural Heritage Trust funded survey to provide estimates of bycatch in the Pilbara Fish trawl Fishery (Stephenson P., C. and Chidlow 2003);
- In November 2004, the Dolphin Reference Group was established to provide the Chief Executive Officer with advice and recommendations on strategies to reduce the frequency and intensity of interactions between the Pilbara Fish Trawl Fishery (the Fishery) and dolphins;
- The Fisheries Research and Development Corporation (FRDC) project 2004/68 Evaluation of the effectiveness of reducing dolphin catches with pingers and exclusion grids in the Pilbara Trawl Fishery (Stephenson 2005);
- The Development and Better Interests Fund (DBIF) funded grid trial program, conducted by the DFWA from December 2005 to July 2006;
- The mandatory implementation of grids into all operational nets in the Fishery from 1 March 2006; and
- In September 2006, the Pilbara Fish Trawl Industry Working Group was established. The Working Group plan to meet each time the vessels return to port, to share results from mitigation gear developments and discuss any problems and future directions. The Chair of the Working Group attends Dolphin Reference Group meetings, providing a vital link for effective communication with the Dolphin Reference group and the Department of Fisheries.

3. REPORT AGAINST WTO CONDITIONS

1. Operation of the fishery will be carried out in accordance with the *Pilbara Fish Trawl Interim Managed Fishery Plan 1997* made under the *Fish Resources Management Act 1994*.

Operations in the Fishery have continued in accordance with the *Pilbara Fish Trawl Interim Managed Fishery Plan 1997*.

2. The Department of Fisheries, Western Australia (DFWA) will inform the Department of the Environment and Water Resources (DEW) of any changes to the management regime for the Pilbara Fish Trawl Interim Managed Fishery.

On 8 May 2007, the Minister for Fisheries approved the extension of the cessation date of the *Pilbara Fish Trawl Interim Managed Fishery Management Plan 1997*, for a further two years, until 30 June 2009. The 'interim' status of the Fishery will remain until such time as it's bycatch issues are resolved.

3. In relation to the incidental bycatch of dolphins and marine turtles within the Pilbara Fish Trawl Interim Managed Fishery, DFWA, will:

a. Continue an observer program (at scientifically robust levels of coverage) to determine the frequency and nature of interactions with cetaceans and marine turtles during fishing operations.

From 1 January to 31 December 2006, a total of 1823 shots were observed in the Fishery, providing observer coverage of 30% for the 2006 calendar year.

During the DBIF funded grid trial program (December 2005 to July 2006), a total of 1161 shots were observed in the Fishery (41% observer coverage). This high level of observer coverage was achieved through the collective work of i) Pelagicus (an industry-funded observer coverage provider), ii) Grid Trial Program Coordinators, and iii) an additional Departmental fishery observer. This high level of observer coverage was organised by the Department to support the grid trial program and assist industry in the implementation of grids. It was recognised that this high level of observer coverage was not sustainable in the longer term, due to the high costs associate with observer coverage. The DFWA therefore determined that 22% observer coverage was the minimum coverage required to gain scientifically robust level of coverage in the Fishery in 2006/07 (based on previous dolphin catch rates).

Since the completion of the grid trial program in July 2006, an industry-funded observer coverage provider company has solely provided the observer coverage in the Fishery. From 1 January to 30 June 2007, a total of 546 shots were observed in the Fishery, providing observer coverage of 19%.

b. Continue to investigate the feasibility of using an Electronic Monitoring System to monitor bycatch in the PFTIMF.

Given the need for a cost-effective alternative to on-board observers industry sought, and successfully gained, funding for a one-month trial of an Electronic Monitoring System (EMS). The EMS pilot study commenced in March 2006. Further funding was gained from the Fisheries Research and Development Corporation (FRDC) Fund for a further 12-month cost-benefit analysis of the EMS and its ability to ultimately replace on-board observers. The cost-benefit analysis is scheduled to commence in August 2007.

c. Ensure that fishing operators immediately notify DFWA of any dolphin or marine turtle interactions; and

The skippers, crew, and licence holders have been informed of their responsibilities in regard to reporting requirements for interactions with protected species. Interactions with protected species are recorded on skippers' logbooks and sent to the Department of Fisheries.

Observer data provides validation of the logbook data. From 1 January to 30 June 2007, there was 19% observer coverage in the Fishery.

d. Ensure that fishing operators report all interactions to DFWA in accordance with agreed procedures and the Memorandum of Understanding between DEW and DFWA.

The Memorandum of Understanding between DEW and DFWA on protected species interactions reporting is yet to be finalised. Once the agreed procedures have been approved by both DEW and DFWA, all fishing operators will report all interactions to DFWA in accordance with this agreement. Until then, 2c applies (above).

3. DFWA, in consultation with DEW, will finalise long-term arrangements to minimise the interaction of cetaceans and marine turtles with fishing operations in the Pilbara Fish Trawl Interim Managed Fishery. Specifically, over the next 12 months, DFWA will:

a. Continue to monitor developments in potential mitigation measures (both national and international).

DFWA continues to monitor and evaluate potential measures being developed both nationally and internationally. In addition to DFWA's continued contact with a number of national and international agencies, the independent Dolphin Reference Group regularly reports on national and international developments. In February 2006, a DFWA representative attended the DEW sponsored Whale and Dolphin Conference in Adelaide.

b. Continue to develop, trial and test the effectiveness of mitigation measures, including, but not limited to, grids.

The FRDC project 2004/68 *Evaluation of the effectiveness of reducing dolphin catches with pingers and exclusion grids in the Pilbara Trawl Fishery* is complete. Results from this project indicated that acoustic pingers were not successful in reducing dolphin bycatch in the Fishery. However, the effectiveness of grids in reducing dolphin bycatch was promising, but inconclusive. A greater number of shots were required to be observed to conclusively determine the effectiveness of grids. The final draft of this report will be sent to DEH as soon as it is available.

Following these preliminary trials, the Dolphin Reference Group recommended that the Department conduct further trials on the effectiveness of grids in reducing bycatch in the Fishery. On 28 December 2006, the DFWA commenced further trials to conclusively determine the effectiveness of grids in reducing protected species interactions, particularly dolphins.

Results indicate that the grids have been successful in reducing the dolphin interactions in the Fishery. In 2005, a total of 56 dolphin interactions were reported (Skippers logbooks and observers) in the Fishery (Table 1). This number has been reduced to 34 reported dolphin interactions in 2006 (for effectively the same level of fishing effort) (Table1). A total of 15 dolphin interactions were reported in the Fishery from 1 January to 30 June 2007 (Table 1).

The dolphin interaction rate has been reduced from 15.2 dolphins per 1000 shots in 2005 (without grids) to 7.5 dolphins per 1000 shots in 2006 (with grids), and 9.2 dolphin interactions per 1000 shots (with grids) from 1 January to 30 June 2007 (Table 1).

Following initial positive results from the grid trial program, grids were installed in all operational nets in the Fishery from 1 March 2006. The Chief Executive Officer of DFMA made this decision based on the significance of the protected species interactions in the fishery, the short-term nature of the Fishery's WTO, and the positive preliminary results from the trials.

Table 1: Number of dolphin interactions and dolphin interaction rate in the Pilbara Fish Trawl Interim Managed Fishery in 2005, 2006 and 1 January to 30 June 2007.

Number of Shots	2007 (Jan to June)		2006		2005	
	Grid	No Grid	Grid	No Grid	Grid	No Grid
Observer	546	0	1593	230	164	659
No Observer	2376	0	3787	543	481	4196
Total	2922	0	5380	773	645	4855
%	19%	0%	87%	13%	12%	88%
Dolphin Interactions	Grid	No Grid	Grid	No Grid	Grid	No Grid
Observer	5	0	12	6	3	10
No Observer	10	0	14	2	1	37
Total	15	0	26	8	4	47
%	33%	0%	76%	24%	8%	92%
Dolphin Interactions / 1000 shots	Grid	No Grid	Grid	No Grid	Grid	No Grid
Observer	9.2	0.0	7.5	26.1	18.3	15.2
No Observer	4.2	0.0	3.7	3.7	2.1	8.8
Total	5.1	0.0	4.8	10.3	6.2	9.7

Results indicate that the grids have also been successful in reducing the marine turtle captures in the Fishery. In 2005, a total of 32 marine turtle interactions were reported (Skippers logbooks and observers) in the Fishery (Table 2). This number was reduced to 17 reported marine turtle interactions in 2006 (for effectively the same level of fishing effort), and only 1 marine turtle interaction was reported in the Fishery from 1 January to 30 June 2007 (Table 2).

The marine turtle interaction rate has been reduced, from 16.7 marine turtles per 1000 shots in 2005 (without grids), to 1.3 marine turtles per 1000 shots in 2006 (with grids), and 1.8 marine turtles per 1000 shots from 1 January to 30 June 2007 (Table 2).

Table 2: Number of marine turtle interactions and marine turtle interaction rate in the Pilbara Fish Trawl Interim Managed Fishery in 2005, 2006 and 1 January to 30 June 2007.

Number of Shots	2007 (Jan to June)		2006		2005	
	Grid	No Grid	Grid	No Grid	Grid	No Grid
Observer	546	0	1593	230	164	659
No Observer	2376	0	3787	543	481	4196
Total	2922	0	5380	773	645	4855
%	19%	0%	87%	13%	12%	88%

Turtle Interactions	Grid	No Grid	Grid	No Grid	Grid	No Grid
Observer	1	0	2	5	1	11
No Observer	0	0	4	6	0	20
Total	1	0	6	11	1	31
%	0%	0%	35%	65%	3%	97%
Turtle Interactions / 1000 shots	Grid	No Grid	Grid	No Grid	Grid	No Grid
Observer	1.8	0.0	1.3	21.7	6.1	16.7
No Observer	0.0	0.0	1.1	11.0	0.0	4.8
Total	0.3	0.0	1.1	14.2	1.6	6.4

Since the completion of the grid trial program, industry has continued to fund and coordinate the refinement of the nets and grids to further reduce dolphin bycatch in the Fishery.

On 23 January 2007, the Dolphin Reference Group recommended that further refinement of the grids and nets was necessary prior to the trialling of any additional bycatch mitigation devices.

On 3 August 2007, the Dolphin Reference Group will discuss options for trialing, refining and developing additional mitigation measures in the Fishery.

c. Investigate other management measures to reduce interactions with dolphins and marine turtles.

The Dolphin Reference Group have discussed a number of other dolphin mitigation measures for the Fishery to consider including “curtains” at the front of the nets and an “acoustic warning” before hauling the nets. The Dolphin Reference Group have recommended these be subject to pilot studies following the refinement and further development of grids and nets. The Dolphin Reference Group recognised that there may be other devices worth trialing (and it is important to seek further suggestions from crew members through the Industry Working Group) but that the Fishery needs to prioritise a small number of devices for initial trials to allow for timely and statistically valuable results.

Since the last report to DEW in January 2007, industry has continued to refine the nets and grids to further reduce dolphin bycatch in the Fishery.

Temporal and spatial data is also being collected to determine patterns in catch. The data to date is inconclusive.

d. Implement across the fishery mitigation and/or management measures endorsed as effective and appropriate by the Dolphin Reference Group (DRG), as a matter of priority.

The Dolphin Reference Group has so far endorsed the implementation of:

- Grids (of various design and configuration);
- an on-board observer program;
- trials of an electronic monitoring system (EMS); and
- underwater digital cameras to monitor the effectiveness of grids as well as dolphin behavior to assist in the development of alternative mitigation methods and/or devices.

The next Dolphin Reference Group Meeting is scheduled for 3 August 2007.

4. Finalise the draft Bycatch Action Plan (BAP) for the Pilbara Fish Trawl Interim Managed Fishery, including providing the opportunity for public comment.

In June 2006, the draft Bycatch Action Plan for the Fishery was released for public comment. The (one) submission received was considered in the finalisation of the plan. The Plan was reviewed in January 2007, and is to be updated again in August 2007. A copy of the updated plan will be forwarded to DEW and placed on the Department of Fisheries' website (www.fish.wa.gov.au) in September 2007.

5. Reports to be produced by DFWA and presented to DEW every six months, and to include:

a. A summary of all protected species interactions reported in the Pilbara Fish Trawl Interim Managed Fishery; and

A summary of all listed/protected species interactions (Skipper and observer data) in the fishery is submitted to DEW on a 6-monthly basis. A summary for the period 1 January to 30 June 2007 is presented in Table 3 below (detailed report is at Appendix 1).

Table 3. Summary of reported listed/protected species interactions in the Pilbara Fish Trawl Interim Managed Fishery, from 1 January to 30 June 2007.

Common Name	Scientific Name	Alive	Dead	Total Reported
Dolphins	<i>Tursiops truncatus</i>	2	13	15
Dolphin (Video siting)*	<i>Tursiops truncatus</i>	0	0	0
Pipefish	Sygnathids	8	55	63
Sawfish, Green	<i>Pristis zijsron</i>	9	2	11
Sawfish, Narrow	<i>Anoxypristis cuspidata</i>	17	2	19
Seahorses	Sygnathids	1	1	2
Sea Snakes	Hydrophiidae	37	8	45
Turtles, Green	<i>Chelonia mydas</i>	1	0	1
Turtles, Loggerhead	<i>Caretta caretta</i>	0	0	0
Turtles, Flatback	<i>Narator depressus</i>	0	0	0

It is envisaged that the dolphin bycatch will be further reduced in the coming months, as industry continue to improve the configuration and design of grids and escape devices.

b. Information sufficient to allow assessment of the progress of DFWA in implementing the above conditions.

This report, in addition to previous reports and supporting documentation, should provide sufficient information for DEW to re-assess the Fishery.