



Australian Government

Department of the Environment and Energy

Assessment of the
**WESTERN AUSTRALIAN
PILBARA FISH TRAWL (INTERIM) MANAGED
FISHERY**

AUGUST 2018

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This report should be attributed as *Assessment of the Western Australian Pilbara Fish Trawl (Interim) Managed Fishery, August 2018*, Commonwealth of Australia 2018.

Disclaimer

This document is an assessment carried out by the Department of the Environment and Energy 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 and Energy on the fishery in relation to decisions under Parts 13 and 13A of the *Environment Protection and Biodiversity Conservation Act 1999*. The views expressed do not necessarily reflect those of the Minister for the Environment and Energy or the Australian Government.

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EXECUTIVE SUMMARY OF THE ASSESSMENT OF THE WESTERN AUSTRALIAN PILBARA FISH TRAWL (INTERIM) MANAGED FISHERY

In March 2018, the Western Australian (WA) Department of Primary Industries and Regional Development, submitted an application, *Application for reassessment under the EPBC Act of the Pilbara Fish Trawl (Interim) Managed Fishery*, to the Department of the Environment and Energy for assessment under the EPBC Act as a Wildlife Trade Operation (WTO) against the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition*. A public comment period was open from 29 March 2018 – 4 May 2018.

The fishery

The WA Pilbara Fish Trawl (Interim) Managed Fishery (the fishery) operates in the Pilbara region of the North Coast Bioregion of Western Australia. Management of the commercial fishery is based (primarily) on input and output controls. These controls include: limited entry; zonal management; individual transferable effort allocations within each area of the fishery (monitored with a satellite-based vessel monitoring system); gear restrictions (total sweep and head rope length; minimum mesh size and mandated excluder grid); and area closures.

Target stocks

The fishery uses trawl nets to target a variety of scalefish species including tropical demersal (bottom dwelling) fish. Indicator species are used to determine the overall status of target species and sustainability levels. The biological stocks for the Pilbara area (mainly demersal resources) have been assessed as 'sustainable-adequate' (2016). The stock status assessment is based on estimates of spawning stock biomass, relative to internationally accepted reference points.

Protected species and ecosystems

An Ecological Risk Assessment was undertaken in 2004, which concluded that the fishery posed a moderate risk to dolphins, sawfish, turtles, seahorses and pipefish (Syngnathids), and posed a low risk to sea snakes. The risk to these species is largely due to the type and use of gear used in the fishery (trawling). Protected species interactions and assessment of risk to protected species, is reported publicly in the State of the Fisheries and Aquatic Resources reports. The most recent report indicates that the risk to listed species is 'moderate'. Proposed conditions to be included with the Part 13 accreditation of the fishery address concerns regarding interactions with dolphins, sawfish and other protected species.

The 2016/17 State of the Fisheries and Aquatic Resources report considers the overall risk of impact to the habitats and ecosystems in the Pilbara region to be low and that the removal of the main target species at current catch rates is unlikely to cause serious or irreversible impact to the ecosystem and associated food chains. Taking current management measures into consideration the Department considers that it is unlikely that fishing activity in the fishery will cause serious or irreversible impact to the ecosystem and associated food chains.

Conclusion

Following assessment against the Guidelines at Section 2, the WA Pilbara Fish Trawl (Interim) Managed Fishery has been found to meet the requirements of the EPBC Act subject to the conditions outlined in Section 4. On this basis, the Department considers that declaration of the harvest operations of the WA Pilbara Fish Trawl (Interim) Managed Fishery, as an approved wildlife trade operation for three years until 20 August 2021, is appropriate. Unless a specific time frame is provided, each condition must be addressed within the period of the approved wildlife trade operation declaration for the fishery.

SECTION 1: ASSESSMENT SUMMARY OF THE WESTERN AUSTRALIAN PILBARA FISH TRAWL (INTERIM) MANAGED FISHERY AGAINST THE GUIDELINES FOR THE ECOLOGICALLY SUSTAINABLE MANAGEMENT OF FISHERIES (2ND EDITION), CONSISTENT WITH THE EPBC ACT

Guidelines assessment	Meets	Partially meets	Does not meet	Details
Management regime	8 of 9	1		Generally a robust management regime. The interim management plan did not involve a public consultation process. The management of the fishery will be subject to broad public consultation when the <i>WA Aquatic Resources Management Act</i> comes into force, likely before 30 June 2019.
Principle 1 (target stocks)	All met			Biological stocks for the Pilbara area (mainly demersal resources) have been assessed as 'sustainable-adequate'. The stock status is reviewed approximately every five years, and the assessments are reported annually. Fisheries independent stock monitoring of indicator species (which reflect the characteristics of the broader exploited stocks) along with catch and effort data, inform annual resource assessment reviews and total allowable catch setting.
Principle 2 (bycatch and TEPS)	8 of 12		4 N/a	Bycatch of Bottlenose Dolphin has reduced over past years since the introduction of bycatch reduction devices in 2006, however, current interaction rates with dolphins has fluctuated from 15 (reported in 2009) to 33 (reported in 2016). Due to the large variances in the number of interactions with dolphins from year to year the Department considers it important that further efforts are undertaken by the fishery to reduce the level of interactions.

				WA DPIRD have been progressing towards full compliance with the various actions outlined in the Sawfish and River Sharks Multispecies Recovery Plan.
Principle 2 (ecosystem impacts)	All met			WA DPIRD have management measures in place including seasonal and area closures to mitigate risk of significant impacts to the ecosystem. This management response appears likely be effective in minimising the impact of the fishery on the ecosystem.
EPBC requirements	Meets	Partially meets	Does not meet	Details
Part 12	Meets			Given the low fishing effort in the fishery and the management and mitigation measures in place, the fishery is not considered to have significant impact to key ecological features identified for the North-west Marine Region.
Part 13	11 of 12		1 N/a.	While DPIRD has introduced measures that have decreased the rate of interactions with protected species over the last decade concerns remain for interactions with dolphins and sawfishes (specifically Green Sawfish). Proposed Part 13 conditions in Section 4 of this report address these concerns.
Part 13A	Meets			The fishery is consistent with the Objects of Part 13A. Declaration of the fishery as a Wildlife Trade Operation for three years, until 20 August 2021 is recommended, subject to conditions detailed in Section 4 of this report.
Part 16	Meets			The fishery is managed in a precautionary manner.

Notes:**Assessment history:**

1st assessment finalised November 2004 – Short term WTO (until June 2005) with five conditions.

2nd assessment finalised April 2008 – WTO with seven conditions and five recommendations.

3rd assessment finalised March 2011 – WTO with five conditions and five recommendations.

4th assessment finalised May 2014 – WTO with three conditions and two recommendations.

The current Part 13 accreditation has three conditions.

Fishery reporting:

Annual report – reported through the State of the Fisheries and Aquatic Resources reports.

– *Status reports of the fisheries and aquatic resources of Western Australia 2015/16*. (page 144)

– *Status reports of the fisheries and aquatic resources of Western Australia 2016/17*. (page 127)

Protected species interactions – Reported publicly in the annual State of the Fisheries and Aquatic Resources reports.

Key links:

Fishery information page on agency website: <http://www.fish.wa.gov.au/Fishing-and-Aquaculture/Commercial-Fishing/Commercial-Fishing-Management/Pages/Major-Commercial-Fisheries.aspx>.

Management plan or equivalent: *Pilbara Fish Trawl Interim Managed Fishery Management Plan 1997*.

Harvest strategy – *North Coast demersal scalefish resource harvest strategy 2017-2021*.

Submission for reassessment under the EPBC Act in March 2018, which includes information that articulates how the WA Department of Primary Industries and Regional Development (DPIRD) has progressed with the conditions prescribed in the 2015 WTO declaration and Part 13 accreditation: <http://www.environment.gov.au/marine/fisheries/wa/pilbara-trawl/application-2018>.

Enforcing legislation:

WA *Fish Resources Management Act 1994* (FRMA, will be replaced by the *Aquatic Resources Management Act 2016*, once enacted).

WA *Fish Resources Management Regulations 1995* (FRMR).

WA FRMA Section 43 Order — *Prohibition on Commercial Fishing for Demersal Scalefish (Pilbara Area) Order 1997* and *Prohibition on Line Fishing (Metal in Lines and Traces) Order 2008*.

Risk assessment and mitigation:

Ecosystem Based Fisheries Management assessments (reviewed annually) are reported in the [North Coast demersal scalefish resource harvest strategy 2017-2021](#).

[A Bycatch Action Plan for the Pilbara Fish Trawl Interim Managed Fishery](#)

Stock assessment and reports:

The most recent stock assessments are reported annually in the State of the Fisheries and Aquatic Resources report at <http://www.fish.wa.gov.au/About-Us/Publications/Pages/State-of-the-Fisheries-report.aspx>.

Other:

Logbook validation research project - [Independent observer program for the validation of EPBC Act protected species bycatch recorded in statutory logbooks from the Pilbara demersal fish trawl managed fishery, 2016-17](#).

Bycatch code of practice – [Pilbara Fish Trawl Fishery: Bycatch Code of Practice](#).

Sawfish recovery plan – [Sawfish and River Sharks Multispecies Recovery Plan](#) (2015).

[Statewide survey of boat-based recreational fishing in Western Australia 2015/16](#)

SECTION 2: DETAILED ANALYSIS OF THE WESTERN AUSTRALIAN PILBARA FISH TRAWL (INTERIM) MANAGED FISHERY AGAINST THE GUIDELINES FOR THE ECOLOGICALLY SUSTAINABLE MANAGEMENT OF FISHERIES (2ND EDITION)

Guidelines criteria	Comment
THE MANAGEMENT REGIME	
The management regime does not have to be a formal statutory fishery management plan as such, and may include non-statutory management arrangements or management policies and programs. The regime should:	
Be documented, publicly available and transparent.	Meets The Western Australian (WA) Pilbara Fish Trawl (Interim) Managed Fishery (Pilbara Fish Trawl Fishery) harvest strategy, governing legislation and general information describing the management regime, are available online on the WA Department of Primary Industries and Regional Development (DPIRD) Fisheries Division website (link accessible in Section 1: Notes).
Be developed through a consultative process providing opportunity to all interested and affected parties, including the general public.	Partially meets The interim management plan did not involve a public consultation process. The expiry date of the current Pilbara Fish Trawl (Interim) Managed Fishery Management Plan 1997, is 30 June 2019. The WA DPIRD has advised that the WA Pilbara Fish Trawl Fishery will continue as an interim managed fishery (under the existing <i>Pilbara Fish Trawl Interim Managed Fishery Management Plan 1997</i> - link accessible in Section 1: Notes) until the WA <i>Aquatic Resources Management Act</i> and associated regulations are in force (expected to be before 30 June 2019). The management of the Fishery will be subject to broad public consultation when the WA <i>Aquatic Resources Management Act</i> comes into force, and the WA Pilbara Fish Trawl Fishery is transitioned to a managed fishery under the WA <i>Fish Resources Management Act 1994</i> or declared a Managed Aquatic Resource under the WA <i>Aquatic Resources Management Act</i> .
Ensure that a range of expertise and community interests are involved in individual fishery management committees and during the stock assessment process.	Meets: Fisheries management decisions are negotiated between government (including fishery scientists) and industry, as well as directly with licence holders, and through the Western Australian Fishing Industry Council. Broader stock assessment and management policies are outlined in the <i>North Coast demersal scalefish resource harvest strategy 2017–2021</i> which was subject to a general public consultation period of one month.

Be strategic, containing objectives and performance criteria by which the effectiveness of the management arrangements are measured.	<p>Meets</p> <p>Performance measures are articulated in the harvest strategy, and reported publicly in the annual State of the Fisheries and Aquatic Resources report (link accessible in Section 1: Notes).</p>
Be capable of controlling the level of harvest in the fishery using input and/or output controls.	<p>Meets</p> <p>The level of harvest for commercial fishing is managed primarily through input controls including: limited entry, gear restrictions and spatial and temporal closures. Annual fishing effort is controlled through Individual Transferable Effort unit entitlements, and monitored by a satellite-based vessel monitoring system (VMS).</p> <p>The level of recreational and charter harvest is primarily managed through a mix of input and output controls including bag limits, possession limits and minimum legal length.</p>
Contain the means of enforcing critical aspects of the management arrangements.	<p>Meets</p> <p>There are targeted and opportunistic on-land and at-sea inspections of vessels, gear, authorisations and catch. The majority of enforcement effort is applied to ensure fishers' effort is maintained within their entitlements. Aerial surveillance and a VMS is also used for this fishery.</p>
Provide for the periodic review of the performance of the fishery management arrangements and the management strategies, objectives and criteria.	<p>Meets</p> <p>The fishery's performance is reviewed annually and reported in the annual State of the Fisheries and Aquatic Resources report (link accessible in Section 1: Notes).</p>
Be capable of assessing, monitoring and avoiding, remedying or mitigating any adverse impacts on the wider marine ecosystem in which the target species lives and the fishery operates.	<p>Meets</p> <p>A periodic risk assessment process is used which considers data collection, monitoring needs and management actions, to assist in mitigating any adverse impacts to the marine ecosystem.</p>
Requires compliance with relevant threat abatement plans, recovery plans, the National Policy on Fisheries Bycatch, and bycatch action strategies developed under the policy.	<p>Meets</p> <p>The WA Pilbara Fish Trawl (Interim) Managed Fishery is compliant with relevant Commonwealth plans and policies.</p>

PRINCIPLE 1 - A fishery must be conducted in a manner that does not lead to over-fishing, or for those stocks that are over-fished, the fishery must be conducted such that there is a high degree of probability the stock(s) will recover.	
Objective 1 - The fishery shall be conducted at catch levels that maintain ecologically viable stock levels at an agreed point or range, with acceptable levels of probability.	
Information requirements	
1.1.1 There is a reliable information collection system in place appropriate to the scale of the fishery. The level of data collection should be based upon an appropriate mix of fishery independent and dependent research and monitoring.	<p>Meets</p> <p>Statutory daily logbooks must be completed. Analysis of data from trial observer programs in 2012 and 2016 determined that total bycatch of protected species were within the range reported through logbooks annually, from 2007 to 2017.</p>
Assessment	
1.1.2 There is a robust assessment of the dynamics and status of the species/fishery and periodic review of the process and the data collected. Assessment should include a process to identify any reduction in biological diversity and /or reproductive capacity. Review should take place at regular intervals but at least every three years.	<p>Meets</p> <p>Given the variety of fish species harvested in the Pilbara area, indicator species are used to determine the overall resource stock status and sustainability levels. The three main indicator species include Red Emperor (<i>Lutjanus sebae</i>), Rankin Cod (<i>Epinephelus multinotatus</i>) and Bluespotted Emperor (<i>Lethrinus punctulatus</i>).</p> <p>The 2018 fishery application submission states that the biological stocks for the Pilbara area (mainly demersal resources) have been assessed as ‘sustainable-adequate’ (2016). The stock status assessment is based on estimates of spawning stock biomass, relative to internationally accepted reference points.</p> <p>These estimates indicate that the spawning biomass of Red Emperor stock to be above the threshold level. The stocks of Rankin Cod and Bluespotted Emperor are assessed as being above the target spawning biomass levels.</p> <p>The stock assessments will be updated in 2017–2018, using representative age structure samples of the indicator species in the Pilbara area collected in 2015. The stock status is reviewed approximately every five years, and the assessments are reported annually in the WA State of the Fisheries and Aquatic Resources report. (Links accessible in Section 1: Notes</p>
1.1.3 The distribution and spatial structure of the stock(s) has been established and factored into management responses.	<p>Meets</p> <p>Tropical finfish species in particular, Emperors, Snappers and Cods in the north coast bioregion are species taken by the Pilbara Demersal Scalefish Fishery (trawl, trap and line sectors) and the Northern Demersal Scalefish Fishery (trap and line).</p> <p>Monitoring of indicator species (which reflect the characteristics of the broader exploited stocks) is used to determine whether there is any risk to the various target species fished in the area. Appropriate management responses are developed as necessary.</p>

<p>1.1.4 There are reliable estimates of all removals, including commercial (landings and discards), recreational and indigenous, from the fished stock. These estimates have been factored into stock assessments and target species catch levels.</p>	<p>Meets</p> <p>All estimates of removals are considered in annual total allowable catch setting, in accordance with the harvest strategy and control rules (link accessible in Section 1: Notes).</p> <p><u>Commercial</u>: The North Coast Bioregion commercial fisheries (mainly Pilbara trap, line and trawl fisheries and the Northern Demersal Scalefish Fishery – trap and line) target tropical finfish including Emperors, Snappers and Cods. The typical catch is approximately 3000 tonnes annually.</p> <p><u>Recreational</u>: The catch assessed through the WA integrated survey for fishing in the North Coast Bioregion during the 2015/2016 period, was approximately 41 tonnes – (<i>Statewide survey of boat-based recreational fishing in Western Australia 2015/16</i>, page 158), (link accessible in Section 1: Notes).</p> <p><u>Indigenous</u>: There is no estimate of Indigenous take available within the fishery area. Historically there has been little overlap between commercial, recreational, Indigenous and charter boat fishers in the Pilbara region, due to area restrictions for inshore commercial fishers.</p> <p>The WA DPIRD advised that a 2003 FRDC-funded study which sampled indigenous fishing effort across Northern Australia, found that of the 671,000 fishing events recorded, less than 1% were offshore (greater than 5km from the coastline).</p>
<p>1.1.5 There is a sound estimate of the potential productivity of the fished stock/s and the proportion that could be harvested.</p>	<p>Meets</p> <p>Fisheries independent stock monitoring of indicator species along with catch and effort data, inform annual resource assessment reviews and total allowable catch setting.</p>

Management responses	
1.1.6 There are reference points (target and/or limit), that trigger management actions including a biological bottom line and/or a catch or effort upper limit beyond which the stock should not be taken.	Meets There are target and limit reference points, and response measures, articulated in the harvest strategy and control rules (link accessible in Section 1: Notes).
1.1.7 There are management strategies in place capable of controlling the level of take.	Meets Fishing effort is controlled through Individual Transferable Effort unit entitlements and monitored by a satellite-based VMS.
1.1.8 Fishing is conducted in a manner that does not threaten stocks of byproduct species.	Meets Byproduct species caught in the fishery are those species which are not taken as target species. Byproduct species stocks are not considered to be threatened by fishing activity in this fishery. Byproduct species generally come from various families including: Lutjanidae, Lethrinidae, Epinephelidae, Mullidae, Carangidae, Nemipteridae, Glaucosomatidae, Labridae, Rachycentridae, Ariidae, Priacanthidae and Sparidae. The 2018 fishery application submission states that these species are not considered vulnerable (compared to longer-lived Teleost species), due to their population production potential. It is considered that teleost species will be fished below the Maximum Sustainable Yield in the fishery. Teleosts are not considered to be vulnerable indicator species.
(Guidelines 1.1.1 to 1.1.7 should be applied to byproduct species to an appropriate level)	
1.1.9 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	Meets The fishery's management arrangements appear likely to maintain stocks within ecologically viable levels.
If overfished, go to Objective 2:	
If not overfished, go to PRINCIPLE 2:	
Objective 2 - Where the fished stock(s) are below a defined reference point, the fishery will be managed to promote recovery to ecologically viable stock levels within nominated timeframes.	
Management responses	
1.2.1 A precautionary recovery strategy is in place specifying management actions, or staged management responses, which are linked to reference points. The recovery strategy should apply until the stock recovers, and should aim for recovery within a specific time period appropriate to the biology of the stock.	Not applicable No stocks overfished. Biological stocks for the Pilbara area (mainly demersal resources) assessed as ' sustainable-adequate '.
1.2.2 If the stock is estimated as being at or below the biological and / or effort bottom line, management responses such as a zero targeted catch, temporary fishery closure or a 'whole of fishery' effort or quota reduction are implemented.	Not applicable No stocks overfished. Biological stocks for the Pilbara area (mainly demersal resources) assessed as ' sustainable-adequate '.

PRINCIPLE 2 - Fishing operations should be managed to minimise their impact on the structure, productivity, function and biological diversity of the ecosystem.	
Objective 1 - The fishery is conducted in a manner that does not threaten bycatch species.	
Information requirements	
<p>2.1.1 Reliable information, appropriate to the scale of the fishery, is collected on the composition and abundance of bycatch.</p>	<p>Meets</p> <p>Reliable information appropriate for the scale of the fishery for abundance and composition of all bycatch is recorded. Bycatch species in the fishery are those species which have limited or no commercial value (e.g. triggerfish), or are under the minimum legal size limit. Bycatch species are generally discarded at sea. The amount of bycatch can vary depending on the location of the trawls, the time of trawling and season, physical oceanographic parameters and biological factors. The 2014 submission estimated that 30% by weight of the total haul in the fishery is discarded as bycatch.</p> <p>The 2016/2017 Status Reports of the Fisheries and Aquatic Resources of Western Australia, states that bycatch of protected species can include: Bottlenose Dolphins, turtles (sometimes encountered and usually released alive), sawfish, sharks, and sea snakes (sometimes encountered and usually released alive) (link accessible in Section 1: Notes).</p> <p>A bycatch survey in 2002 for the WA Pilbara Fish Trawl Fishery indicated that 150 tonnes of sharks (based on 14,463 trawl hours) were caught each year, with a poor level of survivorship (survival after being released) expected for both scalefish and small species of sharks returned to the water.</p> <p>There is mandatory reporting of protected species interactions in the fishery, and daily log books are used to record bycatch. A trial electronic observer program (on-board cameras) has been previously used as a means of independently validating the recording of catches of protected species.</p> <p>The 2018 fishery application submission states that Bottlenose Dolphin bycatch in the fishing area is considered rare, and rates have reduced over past years. It is noted however that the interaction rate with dolphins fluctuates from 15 (reported in 2009) to 33 (reported in 2016). Due to the large variances in the amount of interactions with dolphins from year to year the Department considers it important that further efforts are undertaken by the fishery to reduce the level of interactions.</p>

Assessment

2.1.2 There is a risk analysis of the bycatch with respect to its vulnerability to fishing.

Meets

The most recent Environmental Risk Analysis for the fishery was undertaken in 2004 and concluded that the fishery posed a moderate risk to turtles, dolphins, seahorses and pipefish (Syngnathids), sawfish, and posed a low risk to sea snakes. There is also a potential risk to Grey Nurse Sharks. The risk to these species is largely due to the type and use of gear used in the fishery (trawling).

The introduction of bycatch reduction grids into the fishery in 2006 to reduce the incidental capture of dolphins and marine turtles, did result in a reduction in the catch of large sharks and rays. The retention of sharks and rays in the fishery was prohibited in 2006. Investigations considered bycatch reduction devices were not as effective for sawfish (species not specified), which became entangled in the nets.

The 2018 fishery application submission indicates that there are two vessels operating in the fishery. The area trawled by these vessels, is less than 2% of the northwest shelf of Australia. Due to the small number of fishing vessels operating, and the small area being trawled, the risk to sustainability of bycatch is considered to be 'low' in this area.

Management responses	
<p>2.1.3 Measures are in place to avoid capture and mortality of bycatch species unless it is determined that the level of catch is sustainable (except in relation to endangered, threatened or protected species). Steps must be taken to develop suitable technology if none is available.</p>	<p>Meets</p> <p>The use of Bycatch Reduction Devices (BRDs) has been mandatory in the fishery since 2006. To further assist in mitigating the risk of capture and potential mortality, a bycatch code of practice has been developed (link accessible in Section 1: Notes). The code of practice includes the requirement:</p> <ul style="list-style-type: none"> • to use appropriate bycatch exclusion devices in trawl nets • to ensure otter boards remain stable and the net opening is maintained during trawl operations with vessels using acoustic sensor technology on otter boards (to monitor gear stability) for the fishing vessels to maintain constant speed and direction during trawling (especially during net recovery after trawl operation has been completed). <p>The 2016/2017 Status Reports of the Fisheries and Aquatic Resources of Western Australia, states that investigations were conducted into various BRDs (sub-surface and on-board types) used to mitigate risks to sharks, turtles, sea snakes and Cetaceans. It found that the use of upward inclined exclusion grid was found to improve the 'escape proportions' for many sharks by 21-29%. It also found that all of the BRDs reduced bycatch of turtles and sea snakes.</p> <p>However, investigations considered that they were not as effective for sawfish (species not specified), which became entangled in the nets. Interactions by Cetaceans (only Bottlenose Dolphins specified) with BRDs were rare.</p>
<p>2.1.4 An indicator group of bycatch species is monitored.</p>	<p>Not applicable</p> <p>No bycatch indicator species monitored. As there are only two vessels operating in the fishery the quantity of bycatch is limited to the area harvested by the trawl fleet. Given this area represents less than 2% of the northwest shelf of Australia bycatch in the fishery is considered minimal.</p>
<p>2.1.5 There are decision rules that trigger additional management measures when there are significant perturbations in the indicator species numbers.</p>	<p>Not applicable</p> <p>No bycatch indicator species monitored, as bycatch is considered as minimal.</p>
<p>2.1.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.</p>	<p>Meets</p> <p>It is likely that the fishery is conducted in a way that does not threaten bycatch species. Various management measures have been implemented to assist in reducing the impacts of fishing on bycatch species.</p>

Objective 2 - The fishery is conducted in a manner that avoids mortality of, or injuries to, endangered, threatened or protected species and avoids or minimises impacts on threatened ecological communities.

Information requirements

2.2.1 Reliable information is collected on the interaction with endangered, threatened or protected species and threatened ecological communities.

Meets

There is mandatory reporting of protected species interactions in the fishery, and daily log books are used to record bycatch. A trial electronic observer program (on-board cameras) has been previously used as a means of independently validating the recording of catches of protected species.

Potential interactions between protected species and the fishery, include turtles, sea snakes, sawfish, seahorses (Syngnathids), pipefish, dolphins and Grey Nurse Sharks. The reported bycatch of listed species is reported annually in the status reports (link accessible in Section 1: Notes).

A Memorandum of Understanding (MOU) is in place between the WA DPIRD and the Department, for the Reporting of Fisheries Interactions with Protected Species. The MOU allows for streamlined reporting requirements for interactions with EPBC Act protected species, and to reduce the administrative reporting burden on individual fishers assisting them in meeting their requirements under the EPBC Act. It provides for regular reporting of EPBC Act protected species interactions.

Assessments

2.2.2 There is an assessment of the impact of the fishery on endangered, threatened or protected species.

Meets

Protected species interactions and assessment of risk to protected species, is reported publicly in the State of the Fisheries and Aquatic Resources reports (links accessible in Section 1: Notes). The most recent report indicates that the risk to protected species is '**moderate**'.

An Ecological Risk Assessment undertaken in 2004 concluded that the fishery posed a moderate risk to turtles, dolphins, seahorses and pipefish (Syngnathids), sawfish, and posed a low risk to sea snakes. There is also a potential risk to Grey Nurse Sharks. The risk to these species is largely due to the type and use of gear used in the fishery (trawling).

Some studies have been conducted to determine estimates of abundance for Bottlenose Dolphins in the fishing area, however, estimates were considered to be representative of an 'under-estimate' of the potential population size in the fishery area. The study concluded that estimates were regarded as 'uncertain'. Further research into population size is likely to be dependent on available funding.

The 2018 fishery application submission states that there are high levels (attendance and depredation) of Bottlenose Dolphins during trawling. However, interactions (by Bottlenose Dolphins) with the BRDs are considered to be rare, and estimated to be 5.2 per 1,000 trawls.

The fishery application submission also states: 'Based on high levels of subsurface observer coverage in 2012 (60% of day trawls or 56% of day trawl hours), the subsurface expulsion of megafauna in poor condition was negligible (see Wakefield et al. 2014; Wakefield et al. 2017).'

The WA DPIRD recently completed a study to assess levels of uncertainty associated with estimates of total bycatch for rarely-encountered species, protected species and variations in estimates occurring with observer coverage. In summary, it found:

- higher uncertainty of bycatch estimates occurring during low levels of observer coverage
- the need to determine what levels of observer coverage will be appropriate for future programs
- future programs should consider electronic monitoring (with cameras), to monitor all fishing activity, removing assumptions of fishing activity during observed and unobserved periods
- historic data analysis (human observer) is needed, to account for any bias, uncertainty and imprecision resulting from assumptions.

Analysis of data from two electronic monitoring trials in the fishery in 2012 and 2016 (using on-board cameras) determined that total bycatch of protected species were within the range reported through logbooks annually, from 2007 to 2017. The estimated levels of bycatch were considered to be low, and to be relative to the two-vessel size of the fishery.

	<p>Ongoing electronic monitoring in the fishery should also be considered should protected species bycatch exceed historical ranges.</p> <p>The Department recommends that the Bycatch Action Plan (last updated in 2013) be reviewed. The review should take into account relevant research that has occurred since the plan was last updated. The plan should include clear goals and objectives aimed at minimising interactions with EPBC Act listed species.</p> <p>Should reported interactions with EPBC Act protected species increase outside of historical ranges, the Department expects WA DPIRD to undertake ongoing fishery independent monitoring (electronic or human).</p>
<p>2.2.3 There is an assessment of the impact of the fishery on threatened ecological communities.</p>	<p>Not applicable</p> <p>There are no EPBC Act listed threatened ecological communities in the area of the fishery.</p>

Management responses

2.2.4 There are measures in place to avoid capture and/or mortality of endangered, threatened or protected species.

Meets

As of 2006, the use of BRDs has been mandatory in the WA Pilbara Fish Trawl (Interim) Managed Fishery. BRDs have been found to be effective in reducing turtle and dolphin bycatch.

To further reduce the incidence of interactions with Bottlenose Dolphins the Department recommends WA DPIRD develop criteria for protected species that specify escalating management responses taken by the Western Australian DPIRD, depending on the rate and scale of interactions with protected species by fishers. The Department also expects that any new mitigation measures that are identified through emerging research be considered for use in the fishery where those measures show promise.

The implementation of dolphin bycatch plans by fishers in fisheries with similar bycatch issues, has been seen as a positive step by the Department in reducing the incidence of interactions with dolphins. The Department recommends similar plans are implemented in the Pilbara Fish Trawl (Interim) Managed Fishery.

The Industry Bycatch Code of Practice seeks to minimise the incidence of potential sawfish mortality. The WA DPIRD considers that, while working towards operating in full compliance with actions 1a-1d of the *Sawfish and River Sharks Multispecies Recovery Plan*, and the associated performance measures, operation of the WA Pilbara Fish Trawl Fishery will not adversely affect the conservation status of Green Sawfish.

The 2018 fishery application submission also states that, given the overall low rate of interaction with sawfish, it is unclear what alternative measures will be available to further mitigate risk to this species. The Industry Bycatch Code of Practice promotes improved handling practices, leading to improved chances of survival for sawfish, and is likely to be the most appropriate way towards further risk mitigation.

The Department considers that WA DPIRD have been progressing towards full compliance with the various actions outlined in the *Sawfish and River Sharks Multispecies Recovery Plan*. The Department expects that the fishery will continue to operate in accordance with the national recovery plan and implement additional mitigation measures and alternative strategies (as appropriate), to reduce the impact on Green Sawfish.

2.2.5 There are measures in place to avoid impact on threatened ecological communities.

Not applicable

There are no EPBC listed threatened ecological communities within the area of the fishery.

<p>2.2.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.</p>	<p>Meets</p> <p>Conditions imposed on the fishery should ensure that fishing is conducted in a way that is likely to be effective in avoiding impacts to protected species and ecological communities.</p>
<p>Objective 3 - The fishery is conducted, in a manner that minimises the impact of fishing operations on the ecosystem generally.</p>	
<p>Information requirements</p>	
<p>2.3.1 Information appropriate for the analysis in 2.3.2 is collated and/or collected covering the fishery's impact on the ecosystem and environment generally.</p>	<p>Meets</p> <p>Impacts of fishing activity by the WA Pilbara Fish Trawl Fishery, are assessed annually through WA DPIRD's ecosystem based fisheries management (EBFM) framework, and reported publicly in the annual State of the Fisheries and Aquatic Resources report.</p>
<p>Assessment</p>	
<p>2.3.2 Information is collected and a risk analysis, appropriate to the scale of the fishery and its potential impacts, is conducted into the susceptibility of each of the following ecosystem components to the fishery.</p> <ol style="list-style-type: none"> 1. Impacts on ecological communities <ul style="list-style-type: none"> • Benthic communities • Ecologically related, associated or dependent species • Water column communities 2. Impacts on food chains <ul style="list-style-type: none"> • Structure • Productivity/flows 3. Impacts on the physical environment <ul style="list-style-type: none"> • Physical habitat • Water quality 	<p>Meets</p> <p>The annual risk assessments (through the EBFM framework) consider risks of fishing to stock assemblages and the removal of target stocks from the ecosystem. They also consider impacts on the physical habitat and marine ecosystems.</p> <p>Risks to specific ecosystem and associated habitats by fishing activity in the Pilbara region, were assessed as 'moderate' in the 2016/17 State of the Fisheries and Aquatic Resources report. Despite trawling being regarded as having the highest potential impact to habitats in the area (some impact occurs in specific local areas), the total area in which trawling occurs is considered relatively small. The State of the Fisheries and Aquatic Resources report (2016/2017) considers the overall risk of impact to the habitats and ecosystems in the North Coast Bioregion to be low. Taking into consideration the management measures in place the Department considers that the level of information collected and risk analysis undertaken is appropriate to the scale of the fishery.</p> <p>In addition, the State of the Fisheries and Aquatic Resources report (2016/2017) states that the removal of the main target species at the current catch rates, is unlikely to cause serious or irreversible impact to the ecosystem and associated food chains.</p>
<p>Management responses</p>	
<p>2.3.3 Management actions are in place to ensure significant damage to ecosystems does not arise from the impacts described in 2.3.1.</p>	<p>Meets</p> <p>Management measures in place which include seasonal and area closures, are indicated in the State of the Fisheries and Aquatic Resources report (2016/2017) as being appropriate to mitigate risk of significant impacts on the ecosystem. Taking into consideration the management measures in place the Department considers that the likelihood of significant damage to ecosystems is low.</p>

<p>2.3.4 There are decision rules that trigger further management responses when monitoring detects impacts on selected ecosystem indicators beyond a predetermined level, or where action is indicated by application of the precautionary approach.</p>	<p>Meets</p> <p>Overall, impacts on the ecosystem (North Coast Bioregion) are generally considered to be low. However, the harvest strategy and control rules recognise the need to protect the ecological importance of healthy populations of target stocks (particularly indicator species) in the ecosystem.</p>
<p>2.3.5 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.</p>	<p>Meets</p> <p>The management response appears likely be effective in minimising the impact of the fishery on the ecosystem.</p>

SECTION 3: ASSESSMENT OF THE WESTERN AUSTRALIAN PILBARA FISH TRAWL (INTERIM) MANAGED FISHERY AGAINST THE REQUIREMENTS OF THE EPBC ACT

The table below is not a complete or exact representation of the EPBC Act. It is intended to show that the relevant sections and components of the EPBC Act have been taken into account in the formulation of advice on the fishery in relation to decisions under Part 13 and Part 13A.

Part 12

Section 176 Bioregional Plans	Comment
(5) Minister must have regard to relevant bioregional plans	<p>Meets</p> <p>The <i>Marine Bioregional Plan for the North-west Marine Region 2012</i> identifies a number of key ecological features present in the area of the WA Pilbara Fish Trawl Fishery including; ancient coastlines, demersal fish communities, Glomar Shoals and canyons, some of which are noted as also being of regional priority.</p> <p>The extraction of living resources and bycatch from commercial fisheries has been identified as being of potential concern to some of these key ecological features. The marine bioregional plan also lists physical habitat modification, as being of potential concern in some key ecological features that are found within the area of the WA Pilbara Fish Trawl Fishery. Demersal trawling in the fishery has the potential to modify benthic habitats because it involves the removal, modification or disturbance of seabed flora and fauna.</p> <p>However, there is no evidence to suggest any systematic change to species diversity or richness caused by the WA Pilbara Fish Trawl (Interim) Managed Fishery, indicating fishing effort is not having a material impact on the food chain or trophic structure. Given the relatively low fishing effort (two vessels) in the fishery, and the management and mitigation measures in place (including limited entry, spatial closures and gear restrictions) the fishery is not considered to have significant impact to key ecological features.</p>

Part 13

Accreditable plan, regime or policy (Division 1, Division 2, Division 3, Division 4)	Comment
<p>s. 208A (1) (a-e) , s.222A (1) (a-e), s.245 (1) (a-e), s.265 (1) (a-e)</p> <p>Does the fishery have an accreditable plan of management, regime or policy?</p>	<p>Yes, there is an accreditable management regime. The regime was last accredited under Part 13 in 2014 and this accreditation remains valid.</p>
Division 1 Listed threatened species, Section 208A Minister may accredit plans or regimes	Comment
<p>(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that members of listed threatened species (other than conservation dependent species) are not killed or injured as a result of the fishing?</p>	<p>Yes, there are specific measures in place, including the use of bycatch exclusion devices, to minimise the fishery's impact on protected species. Fishers are required to report protected species interactions.</p> <p>The WA Pilbara Fish Trawl (Interim) Managed Fishery Management Plan 1997, prescribes the restrictions on fishing gear used in the fishery. A number of these restrictions operate to reduce the risk of mortality of listed threatened species potentially encountered in the fishery, including; Green Turtle, Olive Ridley Turtle, Grey Nurse Shark and Green Sawfish. Restrictions in place include bycatch exclusion devices to deflect any large protected species, and escape hatches to allow large species to escape the net.</p> <p>A bycatch code of practice has also been developed, outlining mitigation measures currently used in the WA Pilbara Fish Trawl (Interim) Managed Fishery. The bycatch code of practice specifically outlines measures to reduce the mortality of Green Sawfish.</p> <p>Research regarding populations of bycatch species and bycatch mitigation measures has been undertaken during the period of the current WTO, however these findings have yet to be incorporated into the Bycatch Action Plan developed by the WA DPIRD (last updated 2013). The Department recommends the Bycatch Action Plan is reviewed and updated as appropriate.</p> <p>Export approval of the fishery will be subject to the Part 13 conditions outlined in section 4 of this report that will ensure all reasonable steps are taken to ensure Green Sawfish are not killed or injured as result of fishing.</p>
<p>(g) And, is the fishery likely to adversely affect the survival or recovery in nature of the species?</p>	<p>No, Part 13 conditions included in section 4 of this assessment are intended to ensure ongoing protection of listed threatened species.</p>
Division 2 Migratory species, Section 222A Minister may accredit plans or regimes	Comment
<p>(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that members of listed migratory species are not killed or injured as a result of the fishing?</p>	<p>Yes. Specific management measures in place to mitigate the risk to migratory species (such as marine turtles) which have been demonstrated to be effective. These include the use of mandatory bycatch exclusion devices.</p>

	Mitigation measures and their correct application, are outlined in the Bycatch Code of Practice.
(g) And, is the fishery likely to adversely affect the conservation status of a listed migratory species or a population of that species?	<p>No, the management arrangements in place such as mandatory bycatch exclusion devices, appear to be effective for ensuring the fishery is not likely to adversely affect the conservation status of any listed migratory species.</p> <p>There were a number of interactions with listed migratory species (sawfish, and Green Turtles) reported between 2016 and 2017.</p> <p>However, the estimated levels of bycatch of protected species were considered to be low, and to be relative to the two-vessel size of the fishery. Electronic monitoring in the fishery should also be considered should there be any increases in bycatch compared to historical ranges.</p>
Division 3 Whales and other cetaceans, Section 245 Minister may accredit plans or regimes	Comment
(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that cetaceans are not killed or injured as a result of the fishing?	<p>Yes, specific management measures are in place to minimise the fishery's impact on protected species, including exclusion devices, acoustic sensor technology (to monitor gear stability) and appropriate operation of vessels, to reduce mortality of Cetaceans.</p> <p>To further reduce the incidence of interactions with Bottlenose dolphins the Department recommends WA DPIRD develop criteria for protected species that specify escalating management responses taken by the Western Australian Department of Primary Industries and Regional Development, depending on the rate and scale of interactions with protected species by fishers. The Department also expects that any new mitigation measures that are identified through emerging research be considered for use in the fishery where those measures show promise.</p> <p>Part 13 conditions imposed on the fishery are intended to ensure that all reasonable steps are taken to avoid killing or injuring cetaceans as a result of fishing.</p>
(g) And, is the fishery likely to adversely affect the conservation status of a species of cetacean or a population of that species?	No , the fishery is not likely to adversely affect the conservation status of a species of Cetacean or a population of that species.
Division 4 Listed marine species, Section 265 Minister may accredit plans or regimes	Comment
(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that members of listed marine species are not killed or injured as a result of the fishing?	Yes , under the fishery's management strategy, fishers are not permitted to take protected marine species, and all interactions with protected species must be reported. Specific management measures are in place to minimise the fishery's impact on protected species, including through mandatory use of BRDs.

<p>(g) And, is the fishery likely to adversely affect the conservation status of a listed marine species or a population of that species?</p>	<p>No, given the low interaction rates, the management arrangements in place such as mandatory BRDs, appear to be effective for ensuring the fishery is not likely to adversely affect the conservation status of any listed marine species.</p>
<p>Section 303AA Conditions relating to accreditation of plans, regimes and policies</p>	<p>Comment</p>
<p>(1) This section applies to an accreditation of a plan, regime or policy under section 208A, 222A, 245 or 265.</p>	<p>The Department recommends that the accreditation of the fishery's management regime remain valid under sections 208A, 222A, 245 and 265 subject to the Part 13 conditions outlined in section 4 of this report.</p>
<p>(2) The Minister may accredit a plan, regime or policy under that section even though he or she considers that the plan, regime or policy should be accredited only:</p> <ul style="list-style-type: none"> (a) during a particular period; or (b) while certain circumstances exist; or (c) while a certain condition is complied with. <p>In such a case, the instrument of accreditation is to specify the period, circumstances or condition.</p>	<p>The Department considers that accreditation of the fishery should be subject to the following Part 13 conditions:</p> <p>The WA Department of Primary Industries and Regional Development to:</p> <ul style="list-style-type: none"> a) undertake ongoing fishery independent monitoring (electronic and human) if reported interactions with EPBC Act protected species increase outside of historical ranges. b) review and update the Bycatch Action Plan, to take into account relevant research that has occurred since the plan was last updated. The plan should include clear goals and objectives aimed at minimising interactions with EPBC Act listed species. The Bycatch Action Plan review and update should be completed by early 2020 and be publicly available. <p>The WA Department of Primary Industries and Regional Development, to ensure fishing operations are not adversely affecting the conservation status of dolphin populations, by:</p> <ul style="list-style-type: none"> a) incorporating the use of dolphin mitigation plans by fishers into the industry code of practice. Dolphin mitigation plans are to be prepared by vessel operators, and outline what actions are being taken by the fisher to minimise dolphin interactions on that particular vessel. b) developing a clear set of criteria for protected species interaction management, to be included in the Bycatch Action Plan or Harvest Strategy. The criteria should specify escalating management responses taken by the Western Australian Department of Primary Industries and Regional Development, depending on the rate and scale of interactions with protected species by fishers. c) evaluating any relevant new mitigation measures as identified in emerging research in the field of bycatch mitigation, and adopting such measures where they show promise. <p>The WA Department of Primary Industries and Regional Development, to continue to monitor interactions, to ensure that fishing operations do not adversely affect sawfish (in particular Green Sawfish) through:</p>

	<p>a) continuing to ensure the WA Pilbara Fish Trawl (Interim) Managed Fishery operates in accordance with the national recovery plan for Sawfish (<i>Sawfish and River Sharks Multispecies Recovery Plan</i>).</p> <p>b) developing and implementing additional mitigation measures and alternative strategies (as appropriate), to reduce the impact on Green Sawfish.</p>
(7) The Minister must, in writing, revoke an accreditation if he or she is satisfied that a condition of the accreditation has been contravened.	Not applicable

Part 13A

Section 303BA Objects of Part 13A	
<p>(1) The objects of this Part are as follows:</p> <ul style="list-style-type: none"> (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. 	
Section 303 CG Minister may issue permits (CITES species)	Comment
<p>(3) The Minister must not issue a permit unless the Minister is satisfied that:</p> <ul style="list-style-type: none"> (a) the action or actions specified in the permit will not be detrimental to, or contribute to trade which is detrimental to: <ul style="list-style-type: none"> (i) the survival of any taxon to which the specimen belongs; or 	<p>Not applicable</p> <p>No specimens listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) are permitted to be harvested in the fishery. Therefore, no assessment of the fishery's impact on specimens listed under CITES has been conducted.</p>
<ul style="list-style-type: none"> (ii) the recovery in nature of any taxon to which the specimen belongs; or 	Not applicable
<ul style="list-style-type: none"> (iii) any relevant ecosystem (for example, detriment to habitat or biodiversity); and 	Not applicable
Section 303DC Minister may amend list (non CITES species)	Comment
<p>(1) The Minister may, by legislative instrument, amend the list referred to in section 303DB [list of exempt native specimens] by:</p> <ul style="list-style-type: none"> (a) doing any of the following: <ul style="list-style-type: none"> (i) including items in the list; (ii) deleting items from the list; 	<p>The Department recommends that specimens derived from species harvested in the WA Pilbara Fish Trawl (Interim) Managed Fishery, but not including:</p> <ul style="list-style-type: none"> • specimens that belong to eligible listed threatened species, as defined under section 303BC of the EPBC Act, or

<ul style="list-style-type: none"> (iii) imposing a condition or restriction to which the inclusion of a specimen in the list is subject; (iv) varying or revoking a condition or restriction to which the inclusion of a specimen in the list is subject; or (b) correcting an inaccuracy or updating the name of a species. 	<ul style="list-style-type: none"> • specimens that belong to taxa listed under section 303CA of the EPBC Act (Australia's CITES List), <p>be included in the list of exempt native specimens while the fishery is subject to a declaration as an approved wildlife trade operation.</p>
(1A) In deciding to amend the LENS, the Minister must rely primarily on outcomes of Part 10, Div. 1 or 2 assessment	<p>Not applicable</p> <p>The fishery is not managed by the Commonwealth.</p>
(1C) The above does not limit matters that may be considered when deciding to amend LENS.	<p>Meets</p> <p>The Department considers that it has taken into account all matters relevant to making an informed decision to amend the list of exempt native specimens to include product taken in this fishery.</p>
<p>(3) Before amending the LENS, the Minister must consult:</p> <ul style="list-style-type: none"> (a) other Minister or Ministers as appropriate; and (b) other Minister or Ministers of each State and self-governing Territory as appropriate; and (c) other persons and organisations as appropriate. 	<p>Meets</p> <p>The submission from the WA Department of Primary Industries and Regional Development was made available on the Department's website from 29 March 2018 until 4 May 2018. Three comments were received.</p>
Section 303FN Approved wildlife trade operation	Comment
(2) The Minister may, by instrument published in the <i>Gazette</i> , declare that a specified wildlife trade operation is an approved wildlife trade operation for the purposes of this section.	The WA Pilbara Fish Trawl (interim) Managed Fishery is eligible for declaration as an approved wildlife trade operation.
<p>(3) The Minister must not declare an operation as an approved wildlife trade operation unless the Minister is satisfied that:</p> <ul style="list-style-type: none"> (a) the operation is consistent with the objects of Part 13A of the Act; and 	<p>Meets</p> <p>The operation of the fishery is consistent with Objects of 13A – see assessment against the Guidelines (Section 2).</p>
<ul style="list-style-type: none"> (b) the operation will not be detrimental to: <ul style="list-style-type: none"> (i) the survival of a taxon to which the operation relates; or (ii) the conservation status of a taxon to which the operation relates; and (ba) the operation will not be likely to threaten any relevant ecosystem including (but not limited to) any habitat or biodiversity; and 	<p>Meets</p> <p>The fishery will not be detrimental to the survival or conservation status of a taxon to which it relates, nor will it threaten any relevant ecosystem, within the period of the new export declaration, given the management measures currently in place, which include; limited entry, spatial closures and gear restrictions.</p>
<ul style="list-style-type: none"> (c) if the operation relates to the taking of live specimens that belong to a taxon specified in the regulations – the conditions that, under the regulations, are applicable to the welfare of the specimens are likely to be complied with; and 	<p>Not applicable</p> <p>The Environment Protection and Biodiversity Conservation Regulations 2000 (EPBC Regulations) do not specify Crustacea or fish as a class of animal in relation to the welfare of live specimens.</p>

(d) such other conditions (if any) as are specified in the regulations have been, or are likely to be, satisfied.	Not applicable No other conditions are specified in relation to commercial fisheries in the EPBC Regulations.
(4) In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have regard to: (a) the significance of the impact of the operation on an ecosystem (for example, an impact on habitat or biodiversity); and	Meets The WA Pilbara Fish Trawl (Interim) Managed Fishery will not have a significant impact on any relevant ecosystem within the period of the new export declaration, given the management measures currently in place, which include the arrangements described above at s303FN 3(b).
(b) the effectiveness of the management arrangements for the operation (including monitoring procedures).	Meets The management arrangements that will be employed for the WA Pilbara Fish Trawl (Interim) Managed Fishery, as outlined in the assessment against the Guidelines, are likely to be effective.
(5) In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have regard to: (a) whether legislation relating to the protection, conservation or management of the specimens to which the operation relates is in force in the State or Territory concerned; and (b) whether the legislation applies throughout the State or Territory concerned; and (c) whether, in the opinion of the Minister, the legislation is effective.	Meets The WA Pilbara Fish Trawl (Interim) Managed Fishery will be managed under the following legislation: <i>WA Fish Resources Management Act 1994</i> (FRMA, will be replaced by the <i>Aquatic Resources Management Act</i> once enacted); <i>WA Fish Resources Management Regulations 1995</i> (FRMR); and FRMA Section 43 Order — <i>Prohibition on Commercial Fishing for Demersal Scalefish (Pilbara Area) Order 1997</i> and <i>Notice Prohibition on Line Fishing (Metal in Lines and Traces) Order 2008</i> . The <i>WA Fish Resources Management Act 1994</i> applies throughout WA waters. The Department considers that the legislation is likely to be effective.
(10) For the purposes of section 303FN, an operation is a wildlife trade operation if, and only if, the operation is an operation for the taking of specimens and: (a) the operation is a commercial fishery.	Meets The WA Pilbara Fish Trawl (Interim) Managed Fishery is a commercial fishery.
(10A) In deciding whether to declare that a commercial fishery is an approved wildlife trade operation for the purposes of this section, the Minister must rely primarily on the outcomes of any assessment in relation to the fishery carried out for the purposes of Division 1 or 2 of Part 10.	No assessment of the WA Pilbara Fish Trawl (Interim) Managed Fishery has been carried out under Part 10 of the EPBC Act as it is not a Commonwealth managed fishery.
(10B) Subsection (10A) does not limit the matters that may be taken into account in deciding whether to declare that a fishery is an approved wildlife trade operation for the purposes of this section.	

Section 303FR Public consultation	Comment
<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>(2) A period specified in the notice must not be shorter than 20 business days after the date on which the notice was published on the Internet.</p>	<p>Meets</p> <p>A public notice, which set out the proposal to declare the WA Pilbara Fish Trawl (Interim) Managed Fishery an approved wildlife trade operation, and included the application from the WA Department of Primary Industries and Regional Development, was released for public comment on 29 March 2018 for a minimum of 20 business days.</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>Three public comments were received from; the Humane Society International and the Australian Marine Conservation Society (combined submission), the Curtin University, and the School of Biological Sciences (WA University).</p> <p>This submissions raised ongoing concerns for the potential impact on the dolphin population, Green Sawfish and protected species in general.</p> <p>The Department's assessment has considered the public comments received on the submission, and addressed the issue of management of dolphins, sawfish and protected species generally, through conditions outlined in Section 4 of this assessment.</p>

Section 303FT Additional provisions relating to declarations	Comments
(1) This section applies to a declaration made under section 303FN, 303FO or 303FP.	A declaration for the WA Pilbara Fish Trawl (Interim) Managed Fishery will be made under section 303FN.
<p>(4) The Minister may make a declaration about a plan or operation even though he or she considers that the plan or operation should be the subject of the declaration only:</p> <p>(a) during a particular period; or</p> <p>(b) while certain circumstances exist; or</p> <p>(c) while a certain condition is complied with.</p> <p>In such a case, the instrument of declaration is to specify the period, circumstances or condition.</p>	<p>The standard conditions applied to commercial fishery wildlife trade operations include:</p> <ul style="list-style-type: none"> operation in accordance with the management regime notifying the Department of changes to the management regime, and annual reporting in accordance with the requirements of the Australian Government <i>Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition</i>. <p>The wildlife trade operation instrument for the WA Pilbara Fish Trawl (Interim) Managed Fishery, specifies the standard and any additional conditions applied.</p>
(8) A condition may relate to reporting or monitoring.	One of the standard conditions relates to reporting.
(9) The Minister must, by instrument published in the <i>Gazette</i> , revoke a declaration if he or she is satisfied that a condition of the declaration has been contravened.	Not applicable.
(11) A copy of an instrument under section 303FN, or this section is to be made available for inspection on the internet.	The instrument for the WA Pilbara Fish Trawl (Interim) Managed Fishery made under sections 303FN and the conditions under section 303FT, will be registered as a notifiable instrument and made available through the Department's website.

Part 16

Section 391 Minister must consider precautionary principle in making decisions	Comment
<p>(1) Minister must take account of the precautionary principle in making a decision, to the extent that the decision is consistent with other provisions under this Act.</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>	<p>Meets</p> <p>Given the various management arrangements including; limited entry, spatial closures, gear restrictions and mitigation measures including mandatory use of bycatch exclusion devices, precautionary measures are considered to be in place to prevent serious or irreversible environmental damage being caused by this fishery.</p>

SECTION 4: WESTERN AUSTRALIAN PILBARA FISH TRAWL (INTERIM) MANAGED FISHERY – SUMMARY OF ISSUES REQUIRING CONDITIONS, AUGUST 2018

Issue	Condition
<p><u>General Management</u></p> <p>Export decisions relate to the arrangements in force at the time of the decision. To ensure that these decisions remain valid and export approval continues uninterrupted, the Department of the Environment and Energy 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 byproduct, bycatch, EPBC Act protected species or the ecosystem.</p>	<p>Condition 1:</p> <p>Operation of the Western Australian Pilbara Fish Trawl (Interim) Managed Fishery will be carried out in accordance with the Western Australian Pilbara Fish Trawl (Interim) Managed Fishery Management Plan 1997, in force under the Western Australian <i>Fish Resources Management Act 1994</i>, and the Western Australian Fish Resources Management Regulations 1995.</p> <p>Condition 2:</p> <p>The Western Australian Department of Primary Industries and Regional Development, to inform the Department of the Environment and Energy, of any intended material changes to the Western Australian Pilbara Fish Trawl (Interim) Managed Fishery management arrangements that may affect the assessment against which <i>Environment Protection and Biodiversity Conservation Act 1999</i> decisions are made.</p>
<p><u>Annual Reporting</u></p> <p>It is important that reports be produced and presented to the Department annually in order for the performance of the fishery and progress in implementing the conditions in this report and other managerial commitments to be monitored and assessed throughout the life of the declaration. Annual reports should follow Appendix B to the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i> and 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 EPBC Act protected species, impacts of the fishery on the ecosystem in which it operates and progress in implementing the Department's conditions. Electronic copies of the guidelines are available from the Department's website at http://www.environment.gov.au/resource/guidelines-ecologically-sustainable-management-fisheries.</p>	<p>Condition 3:</p> <p>The Western Australian Department of Primary Industries and Regional Development, to produce and present reports to the Department of the Environment and Energy annually, as per Appendix B of the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i>.</p>

Issue	Conditions (Part 13)
<p><u>Monitoring protected species interactions</u></p> <p>Demersal trawling is a relatively non-selective method of commercial fishing which can have high rates of bycatch, including significant bycatch of protected species. The Western Australian (WA) Pilbara Fish Trawl (Interim) Managed Fishery has ongoing interactions with a number of species protected under the EPBC Act, including marine turtles, dolphins, Green Sawfish, Grey Nurse Sharks, sea snakes and Syngnathids.</p> <p>Following the adoption of mandatory bycatch excluder devices in the fishery in 2006, overall bycatch has reduced. However, ongoing monitoring remains important to determine the continuing impact of the fishery on EPBC Act protected species, particularly dolphins and Green Sawfish. In view of the above, the Department considers it important that the WA Department of Primary Industries and Regional Development continues to maintain sufficient levels of fishery independent monitoring in the fishery (for example via electronic monitoring or human observers), to ensure that the impact of fishing on protected species is accurately recorded and evaluated.</p> <p><u>Bycatch Action Plan</u></p> <p>The Bycatch Action Plan (last reviewed in 2013) includes the objective: 'Report on the progress and review of the operational Bycatch Action Plan', with reviews proposed to occur annually. The Department expects the Bycatch Action Plan to be reviewed and updated early within the period of this new WTO, and as new research priorities arise. It is recommended the inclusion of risk based performance indicators (quantitative and qualitative) be considered as part of the review as this would assist in ensuring that management objectives for bycatch species (including reducing EPBC Act listed species interactions) are met.</p>	<p>Condition A:</p> <p>The WA Department of Primary Industries and Regional Development to:</p> <ol style="list-style-type: none"> undertake ongoing fishery independent monitoring (electronic or human) if reported interactions with EPBC Act protected species increase outside of historical ranges. review and update the Bycatch Action Plan, to take into account relevant research that has occurred since the plan was last updated. The plan should include clear goals and objectives aimed at minimising interactions with EPBC Act listed species. The Bycatch Action Plan review and update should be completed by early 2020 and be publicly available.
<p><u>Protected species interactions – Bottlenose Dolphins</u></p> <p>All dolphin species are protected under the EPBC Act. The Pilbara Fish Trawl (Interim) Managed Fishery has historically reported bycatch of Bottlenose Dolphins (about 12.6 Bottlenose Dolphins per 1000 trawls prior to 2006). Following the adoption of mandatory bycatch excluder devices in the fishery in</p>	<p>Condition B:</p> <p>The WA Department of Primary Industries and Regional Development, to ensure fishing operations are not adversely affecting the conservation status of dolphin populations, by:</p> <ol style="list-style-type: none"> incorporating the use of dolphin mitigation plans by fishers into the industry code of practice. Dolphin mitigation plans are to be prepared by vessel

Issue	Conditions (Part 13)
<p>2006, Bottlenose Dolphin bycatch was reduced by 64% (approximately 5.2 Bottlenose Dolphins per 1000 trawls).</p> <p>Interaction rates with Bottlenose Dolphins since the adoption of mandatory bycatch excluder devices have fluctuated from 15 (reported in 2009) to 33 (reported in 2016). Due to the large variances in the amount of interactions from year to year the Department considers it important that further efforts are undertaken by the fishery to reduce the level of interactions.</p> <p><u>Bycatch Action Plan</u></p> <p>The Bycatch Action Plan (last updated in 2013) identified the reduction of Bottlenose Dolphin bycatch as a priority action for the fishery. A review and update of the Bycatch Action Plan should give consideration to include:</p> <ul style="list-style-type: none"> • a clear set of criteria for protected species reporting • use of dolphin mitigation plans by fishers, and • an escalating set of management responses depending on the rate and scale of interactions with protected species by fishers. <p><u>Mitigation</u></p> <p>As outlined in the Bycatch Code of Practice, recent research found that monitoring and maintaining stability of trawl gear are considered more likely to reduce Bottlenose Dolphin bycatch overall in the fishery compared to other measures such as pingers (acoustic devices). The Department considers it important that the fishery continues to evaluate relevant new mitigation measures identified in emerging research and consider adopting such measures where they show promise.</p>	<p>operators, and outline what actions are being taken by the fisher to minimise dolphin interactions on that particular vessel.</p> <p>b) developing a clear set of criteria for protected species interaction management, to be included in the Bycatch Action Plan or Harvest Strategy. The criteria should specify escalating management responses taken by the Western Australian Department of Primary Industries and Regional Development, depending on the rate and scale of interactions with protected species by fishers.</p> <p>c) evaluating any relevant new mitigation measures as identified in emerging research in the field of bycatch mitigation, and adopting such measures where they show promise.</p>
<p><u>Protected species interactions – Green Sawfish</u></p> <p>A key recovery action identified for sawfish, is to reduce interactions in all fisheries known to have resident populations of sawfish. Research into the biology and population structure of sawfish is critical towards enhancing management arrangements. In view of this, the Department considers that the WA Department of Primary Industries and Regional Development have been</p>	<p>Condition C:</p> <p>The WA Department of Primary Industries and Regional Development, to continue to monitor interactions, to ensure that fishing operations do not adversely affect Sawfish (in particular Green Sawfish) through:</p> <p>a) continuing to ensure the WA Pilbara Fish Trawl (Interim) Managed Fishery operates in accordance with the national recovery plan for Sawfish (<i>Sawfish and River Sharks Multispecies Recovery Plan</i>).</p>

Issue	Conditions (Part 13)
<p>progressing towards full compliance with the various actions outlined in the <i>Sawfish and River Sharks Multispecies Recovery Plan</i>.</p> <p>The 2018 fishery application submission suggests there is a low risk to sawfish populations within the fishery due to fishing activity occurring away from known high abundance areas and nursery grounds and overall reductions in fishing effort. Evaluation of the bycatch reduction measures (both geographically and over time) and assessments conducted through the Ecosystem Based Fisheries Management framework in 2017, suggested additional measures were not needed for the conservation of Green Sawfish in the fishery.</p> <p>While the above studies suggest the risk to Green Sawfish in the fishery is low, some uncertainty remains regarding interaction rates. The 2018 submission indicated that vessel logbook records show the catch of sawfish fluctuating from year to year and as being typically higher during the second and third quarters of each year (noting that the majority of sawfish caught are released alive). In light of this the Department considers it important that the WA Department of Primary Industries and Regional Development continues to consider alternative mitigation measures, to reduce sawfish bycatch and interactions (in particular Green Sawfish) in the fishery.</p>	<p>b) developing and implementing additional mitigation measures and alternative strategies (as appropriate), to reduce the impact on Green Sawfish.</p>

REFERENCES

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