



Australian Government

Department of the Environment and Energy

**Assessment of the
Western Australian Marine Aquarium Fish
Managed Fishery**

October 2019

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This report should be attributed as 'Assessment of the Western Australian Marine Aquarium Fish Managed Fishery October 2019, Commonwealth of Australia 2019'.

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 on the WA Marine Aquarium Fish Managed 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 or the Australian Government.

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EXECUTIVE SUMMARY OF THE ASSESSMENT OF THE WESTERN AUSTRALIAN MARINE AQUARIUM FISH MANAGED FISHERY

On 13 August 2019, the Western Australian Department of Primary Industries and Regional Development submitted an application for the Western Australian Marine Aquarium Fish Managed Fishery (the fishery) to the Department of the Environment and Energy, for assessment under the EPBC Act as an approved 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 16 August – 16 September 2019. No comments were received.

Fishery management arrangements

The fishery operates in Western Australian state waters, extending along the coastline from the Northern Territory border, to the South Australian border. The fishery is primarily dive-based with hand-held nets and tools being used to target species. A formal harvest strategy, 'Marine Aquarium Fish Resources of Western Australia Harvest Strategy 2018-2022' was published in September 2018.

Target stocks

Targeted species include various fish, coral, live rock, algae, seagrass and invertebrates which are collected for ornamental display purposes, with some species also collected as aquaculture broodstock. Volume of catch is considered low due to factors including: target methods (hand collection); weather (potential risk for the small vessels used); human factors (decompression considerations); and water depth suitable for diving.

Traditional stock assessments are not conducted in the fishery, however 'lowest taxonomic level' catches are monitored annually. A risk assessment which was conducted in 2014, reported risk of fishing on stock levels as '**low**', due to low quantities fished taking into consideration the requirements of handling and transport of specimens for the live market.

Protected species and ecosystems

Due to the low fishing effort and selective methods used (hand collection), protected species interactions in the fishery are reported as '**low**'. A small take of Syngnathids in Western Australian state waters is permitted, as interaction with these listed marine species is not an offence under Part 13 of the EPBC Act. However, the take of Leafy Sea Dragons (*Phycodurus eques*) is prohibited in Commonwealth waters. The risk to ecological communities and to ecosystems are both considered '**negligible**' due to the overall small scale of fishing operations, the limited size of areas fished and fishing methods used (hand-collection).

Conclusion

Following assessment, the fishery has been found to meet most of the Guidelines (Section 2) and all of the relevant requirements of the EPBC Act (Section 3). This assessment has also found that the harvest of species listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) to be non-detrimental to those species.

Given the fishery's harvest includes appropriately managed CITES species for export, declaration of the harvest operations of the fishery as an approved wildlife trade operation for three years, under Part 13A of the EPBC Act, until 14 October 2022, is appropriate. Unless a specific time frame is provided, each condition must be addressed within the period of the approved WTO declaration for the fishery.

SECTION 1: ASSESSMENT SUMMARY OF THE WESTERN AUSTRALIAN MARINE AQUARIUM FISH 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	Meets			<p>A new management regime came into force on 1 November 2018. Individual Transferable Quota (for high economic/conservation value species, including coral, live rock, giant clams and Syngnathiformes) arrangements commenced as part of the new management regime. A new electronic reporting system (real-time quota monitoring) was also implemented.</p> <p>The fishery is managed under licence conditions in force under the <i>Fish Resources Management Act 1994</i> and the Fish Resources Management Regulations 1995. Input controls (limited entry, permanent closed areas and gear restrictions) and output controls (catch limits, and Individual Transferrable Quota) for key species.</p>
Principle 1 (target stocks)	Meets			No target stocks are being overfished. Risk to stocks assessed as ' low '. Breeding stocks of species landed have been classified as ' sustainable-adequate '.
Principle 2 (bycatch and TEPS)	10 of 12		2 N/a	Low risk posed to bycatch species. the potential for interactions with protected species is ' low '.
Principle 2 (ecosystem impacts)	Meets			he risk to ecological communities and to ecosystems are both considered ' negligible ' due to the overall small scale of fishing operations, the limited size of areas fished and fishing methods used (hand-collection).
EPBC requirements	Meets	Partially meets	Does not meet	Details
Part 12	Meets			Given the highly selective and relatively small-scale, and given there is no evidence to suggest any systematic change to species diversity or richness caused by the fishery, it indicates that fishing effort is not having a material impact on the food chain or trophic structure.
Part 13	11 of 12		1 N/a	As per Part 13 condition, to ensure: Persons fishing in accordance with the management regime for the Western Australian Marine Aquarium Fish Managed Fishery, in force under the Western Australian <i>Fish Resources Management Act 1994</i> and the Western Australian Fish Resources Management Regulations 1995, do not retain any species listed under Part

				13 of the EPBC Act taken, killed or injured in Commonwealth waters as a result of fishing.
Part 13A	18		1N/a	The fishery is operating consistent with the Objects of Part 13A. Declaration of the fishery as a Wildlife Trade Operation for three years, until 14 October 2022 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 for the Western Australian Marine Aquarium Fish Managed Fishery:

Information on previous assessments is available on the Department's website at <https://www.environment.gov.au/marine/fisheries/wa/marine-aquarium>.

1st assessment finalised October 2005 – four conditions and nine recommendations.

2nd assessment finalised October 2008 – four conditions and seven recommendations.

3rd assessment finalised December 2012 – six conditions (with one Part 13 condition).

4th assessment finalised December 2013 – five conditions and one recommendation.

5th assessment finalised October 2016 – five conditions (with one Part 13 condition).

Key links:

- Agency website:
<http://www.fish.wa.gov.au/Fishing-and-Aquaculture/Commercial-Fishing/Pages/default.aspx>
- Agency website, fisheries publications page - <http://www.fish.wa.gov.au/About-Us/Publications/Pages/default.aspx>
- 'Application to the Department of the Environment and Energy on the Marine Aquarium Fish Managed Fishery and the Take of the Marine Aquarium Species for Aquaculture Broodstock Purposes' (the fishery submission)
- 'Marine Aquarium Fish Managed Fishery Management Plan 2018' (available in Submission as Appendix 2)
- 'Marine Aquarium Fish Resources of Western Australia Harvest Strategy 2018-2022' (available in Submission, as Appendix 5)
- 'Summary of harvest of CITES listed species' – available (Appendix 4) in the 2019 submission.

Enforcing legislation:

- *Fish Resources Management Act 1994*
- Fish Resources Management Regulations 1995.

Risk assessment and mitigation:

- 'Ecosystem-Based Fisheries Management (EBFM) Risk Assessment of the Marine Aquarium Fish Managed Fishery 2014' (published 2018)

Stock assessments and reports:

- 'Status Reports of the Fisheries and Aquatic Resources of Western Australia'
- 'Statewide Marine Aquarium Fish and Hermit Crab resources status report 2018' – available (Appendix 3b) in the 2019 submission.

Other:

- Map of the Marine Aquarium Fish Managed Fishery (available in the Submission, as Appendix 1)

SECTION 2: DETAILED ANALYSIS OF THE WESTERN AUSTRALIAN MARINE AQUARIUM FISH 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.	<p>Meets</p> <p>As of 1 July 2017, the Western Australian (WA) Department of Fisheries was amalgamated into the WA Department of Primary Industries and Regional Development (DPIRD). Reports and management information are made publicly available through publications including: annual reports, Ecological Risk Assessment (ERA) reports, harvest strategies and the Management Plan.</p> <p>The WA Marine Aquarium Fish Managed Fishery's (the fishery) governing legislation, and general information describing the management regime, are available online on the WA DPIRD website (link accessible in Section 1: Notes).</p>
Be developed through a consultative process providing opportunity to all interested and affected parties, including the general public.	<p>Meets</p> <p>Management strategies are prepared through stakeholder consultation, adhering to state legislation. The new management arrangements were developed through consultation with industry and government agencies. During the statutory public consultation process the draft Management Plan, along with the ERA report and draft Harvest Strategy, was posted onto the Department's website for comment. Comments were received and considered from both industry and members of the public.</p>
Ensure that a range of expertise and community interests are involved in individual fishery management committees and during the stock assessment process.	<p>Meets</p> <p>Management measures are decided through consultation between WA DPIRD, the Western Australian Fishing Industry Council, and all licence holders in the fishery.</p> <p>Consultation (through a public consultation process) also occurs with non-fishery stakeholders including government agencies, non-government conservation organisations, and other stakeholders where relevant.</p>
Be strategic, containing objectives and performance criteria by which the effectiveness of the management arrangements are measured.	<p>Meets</p> <p>Target levels, threshold levels and limit levels, form part of the management arrangements to measure performance in the fishery. Control rules are used to determine appropriate management actions where necessary. The Harvest Strategy (link available in Notes section above) outlines the resource specific objectives, as well as the various control rules and measures in place.</p>

<p>Be capable of controlling the level of harvest in the fishery using input and/or output controls.</p>	<p>Meets</p> <p>The 'Marine Aquarium Fish Managed Fishery Management Plan 2018' (the Management Plan) outlines the following:</p> <ul style="list-style-type: none"> • Output controls - Individual Transferable Quota (ITQ) – for high conservation value species. This includes; the 'Convention on International Trade in Endangered Species of Wild Fauna and Flora' (CITES) species (hard and soft corals, Tridacnid Clams, Syngnathiformes); and 'live rock'. • Input controls (limited entry, gear restrictions, restrictions - numbers of vessels, collectors) – for non-quota species. <p>Total Allowable Commercial Catch (TACC) limits are in place for the following:</p> <ul style="list-style-type: none"> • Hard and soft coral = 15000 kg • Tridacnid clams = 2400 individuals • Syngnathiformes = 2000 individuals • 'Live rock' = 60,000 kg <p>Target catch levels are in place for individual species in the quota groups, and for 'non-quota' species. The 'Marine Aquarium Fish Resources of Western Australia Harvest Strategy 2018-2022' was published in September 2018, providing further information (link is available in Notes section, above).</p>
<p>Contain the means of enforcing critical aspects of the management arrangements.</p>	<p>Meets</p> <p>Voluntary compliance is encouraged, and assisted through education, consultation, and guidance provided by Marine Officers. An Operational Compliance Plan is also in place to ensure management arrangements are enforced.</p> <p>The new Management Plan came into force on 1 November 2018. It includes an electronic reporting system (for fishing nominations and statutory catch reporting) aimed at ensuring timely and accurate fishery data reporting, as well as enhanced ITQ monitoring and compliance.</p>
<p>Provide for the periodic review of the performance of the fishery management arrangements and the management strategies, objectives and criteria.</p>	<p>Meets</p> <p>Performance indicators for the fishery are assessed against the reference levels in the Marine Aquarium Fish Resources of Western Australia Harvest Strategy 2018-2022 (the Harvest Strategy) on an annual basis (link is available in Notes section, above).</p>

<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>	<p>Meets</p> <p>WA Marine Aquarium Fish Managed Fishery uses highly selective (hand collection, diving) fishing methods and is relatively small-scale. Large areas within the fishery’s boundaries are marine protected areas that are closed to fishing, and the remaining areas have limited access for the small vessels used in the fishery. There are therefore limited areas where fishing poses a risk to the ecosystem.</p> <p>A risk assessment in 2014 reported in the ‘Ecosystem-Based Fisheries Management (EBFM) Risk Assessment of the Marine Aquarium Fish Managed Fishery 2014’ report (link available above in the Notes section), found that risk to harvested species from contemporary levels of commercial fishing was negligible to low, for all species. The Harvest Strategy also contains environmental impacts and protected species performance indicators which are assessed on an annual basis.</p> <p>The ‘Marine Bioregional Plan for the South-west Marine Region 2012’ and the ‘Marine Bioregional Plan for the North-west Marine Region 2012’ have identified that there are key ecological features present in the area of this fishery, including the Commonwealth marine environments within and adjacent to the west coast inshore lagoons and adjacent to Ningaloo Reef. However, there is no evidence to suggest any systematic change to species diversity or richness caused by the fishery, indicating fishing effort is not having a material impact on the food chain or trophic structure.</p>
<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>	<p>Meets</p> <p>The fishery is compliant with relevant plans/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.

Meets

The new Management Plan includes an electronic reporting system (daily logbook) ensuring real-time quota monitoring and statutory catch reporting. There are 12 managed fishing licence holders in WA Marine Aquarium Fish Managed Fishery. The fishery targets a large variety of species (over 1200 species) in low numbers (per species).

Information collection is considered to be appropriate to the scale of the fishery, and taking into account that the fishery is primarily dive-based (hand held nets/tools used), with fishery operations largely dependent on weather and human constraints (waves/swell, and decompression).

The 'Ecosystem-Based Fisheries Management (EBFM) Risk Assessment of the Marine Aquarium Fish Managed Fishery 2014' (published 2018, link available in Notes section, above) outlines other invertebrates and aquatic plants retained as catch. These include algae, seagrass, Brittle Stars, Feather Stars, jellyfish, Mantis Shrimp, sea anemones, molluscs, sea cucumbers, sea urchins and sponges. Catch amounts can vary, and species are usually caught opportunistically, on a state-wide basis.

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.

Meets

The fishery targets a large variety of species (over 1200 species) in low numbers (per species). Species listed under Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (including hard corals, giants clams, and sea horses) are also targeted in the fishery. Prior to export of CITES species being permitted a non-detriment finding (NDF) must be made by the Department of the Environment and Energy. The Department most recently made an NDF for CITES species taken in the fishery in 2018 which recognises the catch limits set in the Harvest Strategy for the fishery published in 2018 (link is available in Notes section, above).

The WA DPIRD reports annually on the status of the fishery, through the 'Status Reports of the Fisheries and Aquatic Resources of Western Australia' (link accessible in Section 1: Notes). The 'Statewide Marine Aquarium Fish and Hermit Crab Resources Status Report 2018' includes stock status information up to and including 2017.

As stated in the above report, traditional stock assessments are not conducted due biology of the species targeted to the large number of species caught, and low catch numbers per species. Also, as catch is collected for the live market, handling and transport restrictions also apply. This can influence catch and effort levels. Annual monitoring of catch (based on lowest taxonomic level) is achieved through fisher returns.

The statewide stock status has been assessed as '**sustainable-adequate**'. In addition, biomass (individual species) is considered unlikely to be depleted, or recruitment impaired. Based on this, breeding stocks of species landed have been classified as '**sustainable-adequate**'. Outcomes of the risk assessment informed the development of the Harvest Strategy which has been formally implemented.

Taking into consideration the above factors, the most recent risk assessment which was undertaken with industry and other marine management groups in 2014, classified the risk to stocks generally as '**low**'.

<p>1.1.3 The distribution and spatial structure of the stock(s) has been established and factored into management responses.</p>	<p>Meets</p> <p>Stocks incorporate approximately 950 species of marine aquarium fish under the fishery Management Plan, with the take of coral, live rock, algae, sea grass and invertebrates being permitted under the ‘Prohibition on Fishing (Coral, ‘Live Rock and Algae) Order 2007’.</p> <p>During 2017 (the latest data available), there were 11 active licences (out of a total of 12 licences). The area of fishing effort totals 20,781 km² with higher fishing effort occurring in the Capes region, Perth, Geraldton, Exmouth, Dampier and Broome. Catch and effort levels are reported in the Status Reports of the Fisheries and Aquatic Resources of Western Australia (link available in Notes section, above).</p> <p>The above report indicates the commercial fishery catch and effort status (2017) to be ‘acceptable’.</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. 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>The most recent data available (2017) reported in the ‘Statewide Marine Aquarium Fish and Hermit Crab Resources Status Report 2018’ indicates:</p> <ul style="list-style-type: none"> • Total (commercial) catch = 150,544 individuals (fish) <ul style="list-style-type: none"> = 21.9 tonnes of coral, living rock and living sand = 322 L of marine plants. • Recreational = N/A (Noting that recreational fishers are prohibited from taking coral, live rock and sea dragons no documents recreational fisheries) • Indigenous = There is no know indigenous catch for display purposes.
<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>Assessments of indicator species inform the management of the fishery, ensuring harvest levels are maintained at sustainable levels and facilitate stock recovery where relevant. An assessment of indicator species was conducted in 2014, resulting in a classification of ‘adequate’. This included Syngnathids, invertebrates, Hard Coral, Soft Coral, living rock and living sand, Sponges, Algae and Seagrasses.</p> <p>Findings are reported through the ‘Status Reports of the Fisheries and Aquatic Resources of Western Australia’, (link accessible in Section 1: Notes).</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 The 'Marine Aquarium Fish Resource of Western Australia Harvest Strategy 2018-2022' outlines the reference levels (limits, targets and thresholds), performance indicators, and control rules for the fishery. When limits/thresholds are breached, various management measures apply as outlined in the Harvest Strategy for the fishery.
1.1.7 There are management strategies in place capable of controlling the level of take.	Meets The new Management Plan includes ITQ arrangements, applying to high economic /high conservation value species (coral, 'live rock', giant clams and Syngnathiformes). The new Management Plan also includes an electronic reporting system, ensuring real-time quota monitoring and statutory catch reporting.
1.1.8 Fishing is conducted in a manner that does not threaten stocks of byproduct species.	Meets Due to the highly selective harvest method (hand collection), there is no incidental catch of byproduct or bycatch 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 'Ecosystem-Based Fisheries Management (EBFM) Risk Assessment of the Marine Aquarium Fish Managed Fishery 2014' (link available in Notes section, above) outlines other invertebrates and aquatic plants retained as catch. These include algae, seagrass, Brittle Stars, Feather Stars, jellyfish, Mantis Shrimp, sea anemones, molluscs, sea cucumbers, sea urchins and sponges. 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 species fished. Appropriate management responses are developed as necessary. There is no byproduct (retained species) due to the harvest methods used in the fishery (hand collection). Given this, the management arrangements are likely to have a high chance of achieving the objective.

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.	Meets Stocks are not currently overfished. The 'Status Reports of the Fisheries and Aquatic Resources of Western Australia' (link accessible in Section 1: Notes) 2017/18 report, indicates that the statewide stock status has been assessed as 'sustainable-adequate' . In addition, biomass (individual species) is considered unlikely to be depleted, or recruitment impaired. Based on this, breeding stocks of species landed have been classified 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.	Meets Stocks are not currently overfished. The statewide stock status has been assessed as 'sustainable-adequate' . In addition, biomass (individual species) is considered unlikely to be depleted, or recruitment impaired. Based on this, breeding stocks of species landed have been classified 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	
2.1.1 Reliable information, appropriate to the scale of the fishery, is collected on the composition and abundance of bycatch.	Meets Due to the highly selective harvest method (hand collection), there is no incidental catch of bycatch species.
Assessment	
2.1.2 There is a risk analysis of the bycatch with respect to its vulnerability to fishing.	Meets Due to the highly selective harvest method (hand collection), there is no incidental catch of bycatch species.

Management responses	
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.	Meets Due to the highly selective harvest method (hand collection), there is no incidental catch of bycatch species.
2.1.4 An indicator group of bycatch species is monitored.	Not applicable Monitoring of an indicator group of bycatch species is not necessary due to the low risk posed by the harvesting method.
2.1.5 There are decision rules that trigger additional management measures when there are significant perturbations in the indicator species numbers.	Not applicable There are no specific decision rules in place that trigger additional management measures - which is appropriate given the low risk posed to bycatch species.
2.1.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	Meets Due to the highly selective harvest method (hand collection) there is a low risk of incidental catch of bycatch species. Given this, the management arrangements are likely to have a high chance of achieving the objective.

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

As indicated in the 'Status Reports of the Fisheries and Aquatic Resources of Western Australia 2016/17', due to the highly selective fishing method (hand-collection) and, given the low fishing effort and small areas fished each trip, the potential for interactions with protected species is '**low**'.

The fishery is only permitted to collect and export EPBC Act Part 13 listed species (including seahorses, pipefish, Weedy Sea Dragons) that are taken in state waters. It is not an offence under the EPBC Act if interactions with these listed marine species do not occur in Commonwealth waters.

Within state waters, at least 14 species of Syngnathids have been historically targeted in the fishery, including:

- *Hippocampus elongatus* (WA Seahorse)
- *H. angustus* (Western Spiny Seahorse)
- *H. tuberculatus* (Knobby Seahorse)
- *Phyllopteryx taeniolatus* (Common Or Weedy Sea Dragon)
- *Stigmatopora argus* (Spotted Pipefish)
- *Trachyrhamphus bicoarctatus* (Short-Tailed Pipefish).

These species are harvested at low numbers and in accordance with an ecological risk assessment undertaken by the WA DPIRD. It should be noted that Leafy Sea Dragons (*Phycodurus eques*) are listed in Western Australia as a protected species with take prohibited for commercial or recreational purposes. However, an Exemption was granted in 2016 that permitted a very small number to be collected for the purpose of broodstock. Since 2016 two individuals have been permitted to be taken per year under this exemption (a total of six).

As indicated in the 'Ecosystem-Based Fisheries Management (EBFM) Risk Assessment of the Marine Aquarium Fish Managed Fishery 2014' (link available above in the Notes section) there have been no interactions with Part 13 protected species in Commonwealth waters reported by operators in the fishery.

Assessments	
<p>2.2.2 There is an assessment of the impact of the fishery on endangered, threatened or protected species.</p>	<p>Meets</p> <p>A risk assessment was conducted in 2014, and reported through the 'Ecosystem-Based Fisheries Management (EBFM) Risk Assessment of the Marine Aquarium Fish Managed Fishery 2014' report (link available above in the Notes section). The risk to harvested species (for all species) from commercial fishing was assessed as negligible to low.</p> <p>Syngnathids are taken in small numbers. The 2018 catch data (a link to CITES data is available in Notes section above) indicates that 34 <i>Hippocampus angustus</i>, and 119 <i>Hippocampus subelongatus</i> were collected (10 per cent, and 6 percent of the NDF limits, respectively). The take of Leafy Sea Dragons (<i>Phycodurus eques</i>) is prohibited (with 6 specimens taken since 2016 through a ministerial exemption for the purposes of broodstock). Weedy Sea Dragons are totally protected, so cannot be taken for commercial or recreational purposes.</p> <p>Other species indicated in the CITES data (2018), include:</p> <ul style="list-style-type: none"> • <i>Tridacna maxima</i> – 304 individuals (13 percent of NDF) • <i>T. squamosa</i> – 43 individuals (7 percent of NDF). <p>Catch data for various hard coral species are also included in the CITES data (link available in Notes section above). As indicated in the 'Status Reports of the Fisheries and Aquatic Resources of Western Australia 2016/17', due to the highly selective fishing method (hand-collection) and, given the low fishing effort and small areas fished each trip, the potential for interactions with protected species is 'low'.</p>
<p>2.2.3 There is an assessment of the impact of the fishery on threatened ecological communities.</p>	<p>Meets</p> <p>There is the potential for impacts on the World Heritage values of the Shark Bay region of WA, which is an area of major zoological importance, and is renowned for its marine fauna. Shark Bay is also an important nursery ground for larval stages of Crustaceans, fishes and jellyfish.</p> <p>The 'Prohibition on commercial fishing (Shark Bay Marine Park) order 2004', No. 7 of 2004, specifies that WA Marine Aquarium Fish Managed Fishery may only take specimens (which are within the Shark Bay Marine Park) from the park's 'general use' areas.</p> <p>The Department considers that an action taken by an individual fisher acting in accordance with the fishery's management regime, would not be expected to have a significant impact on the World Heritage matter protected by the EPBC Act.</p>

Management responses	
2.2.4 There are measures in place to avoid capture and/or mortality of endangered, threatened or protected species.	Meets There are management measures in place for managing the marine aquarium resources. Measures can be adjusted as needed, to ensure continued protections of species.
2.2.5 There are measures in place to avoid impact on threatened ecological communities.	Meets Various management arrangements are in place, to avoid the risk of impact of fishing on any threatened and ecological communities. The 'Prohibition on commercial fishing (Shark Bay Marine Park) order 2004', No. 7 of 2004, specifies that WA Marine Aquarium Fish Managed Fishery may only take specimens (which are within the Shark Bay Marine Park) from waters within the park's 'general use' areas.
2.2.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	Meets Yes, the fishery is conducted in a way that is likely to be effective in avoiding impacts to protected species and ecological communities.
Objective 3 - The fishery is conducted, in a manner that minimises the impact of fishing operations on the ecosystem generally.	
Information requirements	
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.	Meets Impacts of fishing on the 'Marine Bioregional Plan for the South-west marine region' and the 'North-west marine region' are assessed annually, through WA DPIRD's ecosystem based fisheries management framework, and reported publicly in the annual status reports.

Assessment	
<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 conducted through the ecosystem-based fisheries management framework, consider risks of fishing on stocks, and the removal of target species from the ecosystem, as well as impacts on physical habitat and marine ecosystems. Risks posed by the fishery were assessed as negligible to low in the 2014 report (link is available in the Notes section, above).</p>
Management responses	
<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>The risks to the ecosystem were assessed as negligible to low, particularly given the harvest methods (hand collection) prescribed in the management arrangements.</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>Impacts on the ecosystem were assessed as low in the fishery. The Harvest Strategy outlines control rules assisting to protect the ecological importance of healthy populations of the target species and 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 to be effective in minimising the impact of the fishery on the ecosystem.</p>

SECTION 3: ASSESSMENT OF THE WESTERN AUSTRALIAN MARINE AQUARIUM FISH 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 – Identifying and monitoring biodiversity and making bioregional plans

Section 176 Bioregional Plans	Comment
(5) Minister must have regard to relevant bioregional plans	<p>Meets</p> <p>The 'Marine Bioregional Plan for the South-west Marine Region 2012', and the 'Marine Bioregional Plan for the North-west Marine Region 2012', have identified key ecological features present in the area of the fishery (including the Commonwealth marine environments within and adjacent to the west coast inshore lagoons, and adjacent to Ningaloo Reef). Key features include:</p> <p><u>South-west region</u></p> <ul style="list-style-type: none"> • West Coast Canyons and adjacent shelf break; • Diamantine Fracture Zone (seafloor feature); • Albany Canyons Group (feeding aggregations, seafloor feature); • Kangaroo Island canyons (productivity; feeding, breeding aggregations, seafloor feature); • Kangaroo Island Pool and Eyre Peninsula upwellings; • meso-scale eddies in various locations; • Naturaliste Plateau (unique seafloor feature); • Commonwealth waters surrounding Houtman Abrolhos Islands (high biodiversity) and around/within Geographe Bay (benthic productivity, high biodiversity, feeding, resting, breeding and nursery aggregation); • Commonwealth Waters around the Recherche Archipelago (high biodiversity, breeding, resting and aggregations) • Commonwealth waters adjacent to the Head of Bight (high productivity – pelagic, high biodiversity, feeding and resting aggregations) • Western Rock Lobster – species of high ecological importance • small pelagic fish – species of high ecological importance • demersal slope fish communities of the Central Western Province – high importance to diversity

	<ul style="list-style-type: none"> • benthic invertebrate communities of the eastern Great Australian Bight – communities with high species diversity. <p><u>North-west region</u></p> <ul style="list-style-type: none"> • carbonate banks in the Joseph Bonaparte Gulf – unique seafloor feature • limestone pinnacles in the Bonaparte Depressions - unique seafloor feature • canyons on the slope between Agro Abyssal Plain and Scott Plateau - unique seafloor feature, enhanced biological productivity and aggregations of marine life • ancient coastline at 125 m contour - unique seafloor feature, enhanced biological productivity • Exmouth Plateau - unique seafloor feature • canyons and slope between Cuvier Abyssal Plain and Cape Range Peninsula - unique seafloor feature, enhanced biological productivity and aggregations of marine life • Wallaby Saddle - unique seafloor feature. <p>However, the fishery is highly selective and relatively small-scale, and there is no evidence to suggest any systematic change to species diversity or richness caused by the fishery, indicating fishing effort is not having a material impact on the food chain or trophic structure.</p> <p>Large areas within the fishery boundaries are marine protected areas that are closed to fishing, and the remaining areas have limited access for the small vessels used in the fishery. Therefore, the areas where fishing activity could potentially impact the ecosystem are limited.</p>
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Part 13 – Species and communities

Accreditable plan, regime or policy (Division 1, Division 2, Division 3, Division 4)	Comment
s. 208A (1) (a-e) , s.222A (1) (a-e), s.245 (1) (a-e), s.265 (1) (a-e) Does the fishery have an accreditable plan of management, regime or policy?	<p>Meets</p> <p>Yes, there is an accreditable management regime. The fishery will be managed under licence conditions in force under the <i>Fish Resources Management Act 1994</i> and the Fish Resources Management Regulations 1995.</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>Meets</p> <p>Yes, there are specific measures in place to mitigate the risk to listed threatened species. The management regime for the fishery was most recently accredited under Part 13 of the EPBC Act, in October 2016. WA DPIRD advised the Department that the 'Marine Aquarium Fish Management Plan 1995', was replaced with the 'Marine Aquarium Fish Managed Fishery Management Plan 2018', which commenced on 1 November 2018.</p> <p>The new Management Plan included the commencement of ITQ arrangements (for high economic/conservation value species, including coral, live rock, giant clams and Syngnathiformes), and an electronic reporting system (real-time quota monitoring). The Department agreed that the amendments did not significantly affect the sustainability of the fishery, and that a new Part 13 declaration was not required at that time.</p> <p>The Department considers that the management arrangements have not significantly changed, and continue to require persons engaged in fishing under the plan to take all reasonable steps to ensure that listed threatened species are not killed or injured as a 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>Meets</p> <p>Due to the low fishing effort (hand-collection by divers) and the limited size of areas fished during a trip, protected species interactions in the fishery is reported as 'low', as indicated in the 'Status reports of the Fisheries and Aquatic Resources of Western Australia 2016/2017' (extract, available in Links section above).</p> <p>There were no interactions with species listed under Part 13, reported in the fishery from Commonwealth waters during 2015/2016, as indicated in the 'Ecosystem-Based Fisheries Management (EBFM) Risk Assessment of the Marine Aquarium Fish Managed Fishery 2014' (published in 2018, link available above in the Notes section). A small take of Syngnathids is allowed under a WTO in state waters, however the take of Leafy Sea Dragons is prohibited in commonwealth waters in accordance with Part 13 of the EPBC Act.</p> <p>Given the above, the Department considers the current operation of the fishery is unlikely to adversely affect the survival or recovery in nature of any threatened species. The Department therefore recommends that the management regime for the fishery be reaccredited under Part 13 of the EPBC Act.</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>Meets</p> <p>Yes, there are specific measures in place to mitigate the risk to listed migratory species. The management regime for the fishery was most recently accredited under Part 13 of the EPBC Act, in October 2016. WA DPIRD advised the Department that the 'Marine Aquarium Fish Management Plan 1995', was replaced with the 'Marine Aquarium Fish Managed Fishery Management Plan 2018' which commenced on 1 November 2018.</p> <p>The new Management Plan included the commencement of ITQ arrangements (for high economic/conservation value species, including coral, live rock, giant clams and Syngnathiformes), and an electronic reporting system (real-time quota monitoring). The Department agreed that the amendments did not significantly affect the sustainability of the fishery, and that a new Part 13 declaration was not required at that time.</p> <p>The Department considers that the management arrangements have not significantly changed, and continue to require persons engaged in fishing under the plan to take all reasonable steps to ensure that listed migratory species are not killed or injured as a result of fishing.</p>
<p>(g) And, is the fishery likely to adversely affect the conservation status of a listed migratory species or a population of that species?</p>	<p>Meets</p> <p>Due to the low fishing effort (hand-collection by divers) and the limited size of areas fished during a trip, protected species interactions in the fishery is reported as 'low' as indicated in the 'Status reports of the Fisheries and Aquatic Resources of Western Australia 2016/2017' (extract, available in Links section above).</p> <p>There were no interactions with species listed under Part 13, reported in the fishery from Commonwealth waters, during 2015/2016, as indicated in the 'Ecosystem-Based Fisheries Management (EBFM) Risk Assessment of the Marine Aquarium Fish Managed Fishery 2014' (published in 2018, link available above in the Notes section).</p> <p>Therefore, the Department considers the current operation of the fishery is not likely to adversely affect the conservation status of a listed migratory species or a population of that species. The Department therefore recommends that the management regime for the fishery be reaccredited under Part 13 of the EPBC Act.</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>Meets</p> <p>The management regime for the fishery was most recently accredited under Part 13 of the EPBC Act in October 2016. WA DPIRD advised the Department that the 'Marine Aquarium Fish Management Plan 1995', was replaced with the 'Marine Aquarium Fish Managed Fishery Management Plan 2018' which commenced on 1 November 2018.</p> <p>The new Management Plan included the commencement of ITQ arrangements (for high economic/conservation value species, including coral, live rock, giant clams and Syngnathiformes), and an electronic reporting system (real-time quota monitoring). The Department agreed that the amendments did not significantly affect the sustainability of the fishery, and that a new Part 13 declaration was not required at that time.</p> <p>The Department considers that the management arrangements have not significantly changed, and continue to require persons engaged in fishing under the plan, to take all reasonable steps to ensure that whales and other Cetaceans are not killed or injured 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?	<p>Meets</p> <p>Due to the low fishing effort (hand-collection by divers) and the limited size of areas fished during a trip, protected species interactions in the fishery is reported as 'low', as indicated in the 'Status reports of the Fisheries and Aquatic Resources of Western Australia 2016/2017' (extract, available in Links section above).</p> <p>There were no interactions with species listed under Part 13, reported in the fishery from Commonwealth waters during 2015/2016, as indicated in the 'Ecosystem-Based Fisheries Management (EBFM) Risk Assessment of the Marine Aquarium Fish Managed Fishery 2014' (published in 2018, link available above in the Notes section).</p> <p>Therefore, the Department considers the current operation of the fishery is not likely to adversely affect the conservation status of a species of Cetacean or a population of that species. The Department therefore recommends that the management regime for the fishery be reaccredited under Part 13 of the EPBC Act.</p>

Division 4 Listed marine species, Section 265 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 marine species are not killed or injured as a result of the fishing?</p>	<p>Meets</p> <p>The management regime for the fishery was most recently accredited under Part 13 of the EPBC Act in October 2016. WA DPIRD advised the Department that the 'Marine Aquarium Fish Management Plan 1995', was replaced with the 'Marine Aquarium Fish Managed Fishery Management Plan 2018' which commenced on 1 November 2018.</p> <p>The new Management Plan included the commencement of ITQ arrangements (for high economic/conservation value species, including coral, live rock, giant clams and Syngnathiformes), and an electronic reporting system (real-time quota monitoring). The Department agreed that the amendments did not significantly affect the sustainability of the fishery, and that a new Part 13 declaration was not required at that time.</p> <p>The Department considers that the management arrangements have not significantly changed, and continue to require persons engaged in fishing under the plan to take all reasonable steps to ensure that listed marine species are not killed or injured as a result of fishing.</p>
<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>Meets</p> <p>Due to the low fishing effort (hand-collection by divers) and the limited size of areas fished during a trip, protected species interactions in the fishery is reported as 'low', as indicated in the 'Status reports of the Fisheries and Aquatic Resources of Western Australia 2016/2017' (extract, available in Links section above).</p> <p>There were no interactions with species listed under Part 13, reported in the fishery from Commonwealth waters, during 2015/2016, as indicated in the 'Ecosystem-Based Fisheries Management (EBFM) Risk Assessment of the Marine Aquarium Fish Managed Fishery 2014' (published in 2018, link available above in the Notes section). A small number of Leafy Sea Dragons have been taken in state waters through a ministerial exemption to the prohibited take of a western Australian protected species listing (six in total since 2016 for broodstock purposes) however take remains is prohibited in Commonwealth waters in accordance with Part 13 of the EPBC Act. Therefore, the Department considers the current operation of the fishery is not likely to adversely affect the conservation status of a listed marine species. The Department therefore recommends that the management regime for the fishery be reaccredited under Part 13 of the EPBC Act.</p>

Section 303AA Conditions relating to accreditation of plans, regimes and policies	Comment
(1) This section applies to an accreditation of a plan, regime or policy under section 208A, 222A, 245 or 265.	The Department considers that the accreditation of the fishery management regime remains valid under sections 208A, 222A, 245 and 265.
(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: (a) during a particular period; or (b) while certain circumstances exist; or (c) while a certain condition is complied with. In such a case, the instrument of accreditation is to specify the period, circumstances or condition.	To satisfy the requirements of section 265, the Department recommends that the fishery remains accredited under Part 13, subject to a condition that requires WA DPIRD to ensure that the management regime, continues to require fishers not to retain any species listed under Part 13 of the EPBC Act taken, killed or injured in Commonwealth waters as a result of fishing.
(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 – International movement of wildlife specimens

Section 303BA Objects of Part 13A	
(1) The objects of this Part are as follows: (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;	The management arrangements for the fishery have been assessed as consistent with the general guidance provided in the objects of Part 13A as: <ul style="list-style-type: none"> • the fishery will not harvest any Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) listed species • there are management arrangements in place to ensure that the resource is being managed in an ecologically sustainable way (see Table 1) • the operation of the WA Marine Aquarium Fish Managed Fishery, is unlikely to be unsustainable and threaten biodiversity within the next three years, and • the Environment Protection and Biodiversity Conservation Regulations 2000 do not specify fish as a class of animal in relation to the welfare of live specimens.

<ul style="list-style-type: none"> (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>Given the fishery's management arrangements in place to monitor and control the level of harvest of CITES species, and noting the minimal level of CITES species being exported from the fishery, the Department considers that the fishery will not be detrimental to the survival of any taxon to which the CITES specimen belongs in the short to medium term. A condition on the WTO declaration for the fishery includes annual reporting requirements, which will allow the Department to monitor the status of CITES specimens harvested in the fishery.</p>
<ul style="list-style-type: none"> (ii) the recovery in nature of any taxon to which the specimen belongs; or 	<p>The CITES specimens harvested from the fishery, are not considered to be over fished in WA. Managements arrangements in place (as part of the WTO conditions) including specific performance indicators/trigger limits for CITES species, assist in ensuring ecologically sustainable harvest. Should stocks fall below defined reference points, the fishery is conducted such that there is a high degree of probability the stock would recover to ecologically viable stock levels within nominated timeframes.</p>
<ul style="list-style-type: none"> (iii) any relevant ecosystem (for example, detriment to habitat or biodiversity); and 	<p>Recognising the low-impact nature of the harvest, gear used (hand held nets, hand-held instruments), and the small scale of the fishery, the potential for the fishery to impact unacceptably and unsustainably on any relevant ecosystem generally, is considered low.</p>
Section 303FN Approved wildlife trade operation	Comment
<p>(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.</p>	<p>Yes, the instrument to declare the fishery as an approved wildlife trade operation under section 303FN, will be registered on the Federal Register of Legislation and a link to the instrument made available through the Department's website. Under subsection 56(1) of the <i>Legislation Act 2003</i> (CTH), registration on the FRL meets the requirements for gazettal.</p>

<p>(3) The Minister must not declare an operation as an approved wildlife trade operation unless the Minister is satisfied that:</p> <p>(a) the operation is consistent with the objects of Part 13A of the Act; and</p>	<p>Meets</p> <p>The fishery operation is consistent with Objects of 13A – see above assessment against the Guidelines.</p>
<p>(b) the operation will not be detrimental to:</p> <p>(i) the survival of a taxon to which the operation relates; or</p> <p>(ii) the conservation status of a taxon to which the operation relates; and</p> <p>(ba) the operation will not be likely to threaten any relevant ecosystem including (but not limited to) any habitat or biodiversity; and</p>	<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 next three years, given the management measures currently in place, which include limited entry, closures, prohibitions, gear restrictions (hand held nets) and catch limits.</p>
<p>(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>	<p>Meets</p> <p>The Environment Protection and Biodiversity Conservation Regulations 2000 (EPBC Regulations) do not specify fish or invertebrates as a class of animal in relation to the welfare of live specimens.</p> <p>Permits authorising the export of live fish or marine invertebrates harvested in the fishery will be issued with the inclusion of the permit condition relating to transport of live specimens on permits for live fish or marine invertebrates. Whilst this is not explicitly provided for under the EPBC Regulations, this decision would be consistent with the Objects of Part 13A of the EPBC Act. It would also meet the requirements stipulated by CITES Article III, IV and V and Resolution Conf. 10.21 (Rev. CoP16) on Transport of live specimens.</p>
<p>(d) such other conditions (if any) as are specified in the regulations have been, or are likely to be, satisfied.</p>	<p>Meets</p> <p>No other conditions are specified in relation to commercial fisheries in the EPBC Regulations.</p>
<p>(4) In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have regard to:</p>	<p>Meets</p> <p>The fishery will not have a significant impact on any relevant ecosystem within the next three years, given the management measures currently in place, which include the arrangements described above at s303FN 3(b).</p>

(a) the significance of the impact of the operation on an ecosystem (for example, an impact on habitat or biodiversity); and	
(b) the effectiveness of the management arrangements for the operation (including monitoring procedures).	Meets The management arrangements that will be employed for the fishery, as outlined in in the assessment against the Guidelines (above), 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 fishery will be managed under the fishery Management Plan, <i>Fish Resources Management Act 1994</i> and the Fish Resources Management Regulations 1995. The <i>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 fishery is a commercial fishery.
Section 303FR Public consultation	Comment
(1) Before making a declaration under section 303FN, the Minister must cause to be published on the Internet a notice: (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	Meets A public notice which set out the proposal to declare the fishery an approved wildlife trade operation, and included the application from WA DPIRD, was released for public comment on 16 August 2019 to 16 September 2019, for a minimum of at least 20 business days.

<p>(c) inviting persons and organisations to give the Minister, within the period specified in the notice, written comments about the proposal.</p> <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>(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>Not applicable</p> <p>No public comments on the proposal were received during the public consultation period.</p>
<p>Section 303FT Additional provisions relating to declarations</p>	<p>Comments</p>
<p>(1) This section applies to a declaration made under section 303FN, 303FO or 303FP.</p>	<p>A declaration for the fishery will be made under section 303FN.</p>
<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 Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition. <p>The wildlife trade operation instrument for the fishery, specifies the standard and any additional conditions applied.</p>
<p>(8) A condition may relate to reporting or monitoring.</p>	<p>One of the standard conditions relates to reporting.</p>
<p>(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.</p>	

<p>(11) A copy of an instrument under section 303FN, or this section is to be made available for inspection on the internet.</p>	<p>The instrument for the 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.</p>
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Part 16 – Precautionary principle and other considerations in making decisions

<p>Section 391 Minister must consider precautionary principle in making decisions</p>	<p>Comment</p>
<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 annual monitoring of 'lowest taxonomic level' catches annually, the use of selective low impact fishing gear, relatively low effort in the fishery, and performance indicators and control rules outlined in the Harvest Strategy, precautionary measures are considered to be in place to prevent serious or irreversible environmental damage being caused by this fishery.</p>

SECTION 4: WESTERN AUSTRALIA MARINE AQUARIUM FISH MANAGED FISHERY – SUMMARY OF ISSUES REQUIRING CONDITIONS, OCTOBER 2019

Issue	Condition
<p><u>General Management</u></p> <p>The export of Australian native flora and fauna is regulated by the Department of the Environment and Energy (the Department) under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act). The EPBC Act export approval process is based on an assessment of the fishery’s management arrangements that are in force at the time of the decision.</p> <p>Any reference to the Western Australian legislation can only be incorporated in the Commonwealth instruments as point-in-time references (that is, the fishery’s management arrangements at the time the Commonwealth instrument commences).</p> <p>Therefore, any changes that are made to Western Australian legislation (including changes to Acts, regulations or management plans) after the Commonwealth instruments commence may not be covered by the export approval.</p> <p>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, protected species or the ecosystem.</p>	<p>Condition 1:</p> <p>Operation of the fishery will be carried out in accordance with the <i>management regime</i> under the <i>Fish Resources Management Act 1994</i> (Western Australia) and the Fish Resources Management Regulations 1995 (Western Australia).</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 Marine Aquarium Fish Managed Fishery management arrangements that may affect the assessment against which <i>Environment Protection and Biodiversity Conservation Act 1999</i> decisions are made.</p>

Annual reporting

It is important that reports be produced and presented to the Department of the Environment and Energy 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 'Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition' 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 conditions identified in the previous assessment report.

Electronic copies of the guidelines are available from the Department of the Environment and Energy's website at <http://www.environment.gov.au/resource/guidelines-ecologically-sustainable-management-fisheries>.

The Western Australian Department of Primary Industries and Regional Development provides annual reports are provided through extracts of the 'Status Reports of the Fisheries and Aquatic Resources of Western Australia: The State of the Fisheries' publications, 2016/17 and 2017/18.

Convention on International Trade of Endangered Species of Fauna and Flora (CITES) and Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) listed species

To ensure EPBC Act requirements continue to be met in relation to CITES listed species, the Department considers it important that the Western Australian Department of Primary Industries and Regional Development continue to advise the Department of any additional CITES species harvested in the fishery, including the level of harvest.

Conditions 3:

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 'Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition'.

Condition 4:

The Western Australian Department of Primary Industries and Regional Development to:

- a) continue to limit harvest of CITES listed species, according to current non-detriment findings, for each species or species group
- b) continue to consult with the Department of the Environment and Energy, prior to a change to the management arrangements for a CITES or EPBC Act listed species being implemented.

The WA Marine Aquarium Fish Managed Fishery harvests a number of species listed under the CITES, as well as a small number of species protected as listed marine species under Part 13 of the EPBC Act (Syngnathids). Harvest of all of these species is subject to special requirements under the EPBC Act, in recognition of the international conservation status of these species.

As a party to the Convention, Australia must apply all CITES provisions of the EPBC Act to CITES imports and exports as appropriate. Prior to permitting export of CITES-listed species, the CITES Scientific Authority of Australia must establish that allowing export will not be detrimental to the species' survival. This is known as a non-detriment finding.

The following groups of protected species are currently permitted to be harvested in the WA Marine Aquarium Fishery:

- hard corals
- giant clams (*Tridacna* species)
- Syngnathids (Seahorses and Sea Dragons).

The Western Australian Department of Primary Industries and Regional Development has provided all available information on the harvest of these species in the fishery, which the CITES Scientific Authority of Australia has considered in making non-detriment findings for ongoing harvest of these species. These non-detriment findings may be reviewed as new information becomes available.

To ensure that EPBC Act requirements for CITES listed species continue to be met, harvest of these species must be constrained within the limits described within the non-detriment findings. Information on any additional CITES species or EPBC Act listed species likely to be harvested in the fishery, must be provided to the Department prior to harvest, to enable inclusion of these species on future export approvals.

Specimens of CITES listed species that are not listed on the schedule of a current wildlife trade operation cannot be issued a CITES export permit. All

<p>CITES specimens included in the schedule require a CITES permit issued by the Department in order to be exported from Australia.</p>	
<p><u>Revised risk assessment and CITES species</u></p> <p>The Department acknowledges that a risk assessment workshop was conducted in 2014, and that results were published through the 'Ecosystem-Based Fisheries Management (EBFM) Risk Assessment of the Marine Aquarium Fish Managed Fishery 2014'. The outcomes of the risk assessment determined that the risk (from contemporary levels of commercial fishing) to harvested species was low to negligible, for all species, for the next five years. Coral species were also assessed, and the risk level was determined as being of no material change in risk (based on based on the doubling of existing harvest levels over five years). Outcomes of the risk assessment informed the development of the Harvest Strategy which has been formally implemented.</p> <p>Given that the WA Marine Aquarium Fish Managed Fishery continues to harvest CITES species, and given that the 2014 risk assessment results refer to the five years following the risk assessment (from 2014), the Department considers that a revised risk assessment needs to be considered early during the approval period (2019-20).</p> <p>The Department encourages the Western Australian Department of Primary Industries and Regional Development, to continue to collaborate with relevant stakeholders for research purposes.</p> <p>The Department also encourages the Western Australian Department of Primary Industries and Regional Development to provide the Department with outcomes from research projects (such as the Fisheries Research and Development Corporation project underway) and ensure the outcomes are made available to the public.</p>	<p>Condition 5:</p> <p>The Western Australian Department of Primary Industries and Regional Development to:</p> <ol style="list-style-type: none"> a) consider conducting a review of the risk assessment for CITES species including coral, with consideration given to determining risk over the next five years. b) continue to consider further research into CITES species in the context of the outcomes of the risk assessment, including species distribution and abundance, in areas of high fishing effort. c) continue to collaborate with relevant stakeholders, to conduct research and provide outcomes of research projects, to the Department of the Environment and Energy, when outcomes are finalised. Outcomes should also be made publicly available.
<p><u>Harvest of EPBC listed species</u></p> <p>The Western Australian Marine Aquarium Fish Managed Fishery, harvests low numbers of Syngnathids. These are protected under the EPBC Act as listed</p>	<p>Condition (Part 13):</p> <p>Persons fishing in accordance with the management regime for the Western Australian Marine Aquarium Fish Managed Fishery, in force under the Western Australian <i>Fish Resources Management Act 1994</i> and the Western Australian Fish Resources Management</p>

marine species, in accordance with the WA Marine Aquarium Fish Managed Fishery Harvest Strategy.

Harvest of these species in Commonwealth waters is prohibited, however interactions that do not occur in Commonwealth waters are not an offence under the EPBC Act. Therefore, the Western Australian Marine Aquarium Fish Managed Fishery is only permitted to collect and export Part 13 listed species (including seahorses, pipefish, Weedy Sea Dragons and Leafy Sea Dragons) that are taken in state waters.

Regulations 1995, do not retain any species listed under Part 13 of the EPBC Act taken, killed or injured in Commonwealth waters as a result of fishing.

REFERENCES

- Department of Sustainability, Environment, Water, Population and Communities, ACT (2012) 'Marine bioregional plan for the South-west Marine Region', Canberra ACT, <http://www.environment.gov.au/marine/marine-bioregional-plans>.
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- Western Australian Department of Primary Industries and Regional Development, (2018) 'Marine Aquarium Fish Resources of Western Australia Harvest Strategy 2018-2022'
- Western Australian Department of Primary Industries and Regional Development, 'Status Reports of the Fisheries and Aquatic Resources of Western Australia'
- Western Australian Department of Primary Industries and Regional Development 'Statewide Marine Aquarium Fish and Hermit Crab Resources Status Report 2018'