



Australian Government

Department of the Environment and Energy

**Assessment of the
Victorian
PQ Aquatics Syngnathids Wildlife Trade Operation**

December 2018

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This report should be attributed as '*Assessment of the Victorian PQ Aquatics Syngnathids Wildlife Trade Operation, 2018*, Commonwealth of Australia 2018.

Disclaimer

This document is an assessment carried out by the Department of the Environment and Energy of a commercial operation 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 (or delegate) on the operation in relation to decisions under 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 VICTORIAN PQ AQUATICS SYNGNATHIDS WILDLIFE TRADE OPERATION

On 28 August 2018, PQ Aquatics submitted an application for the PQ Aquatics Syngnathids Wildlife Trade Operation to the Department of the Environment and Energy (the Department) for assessment under the provisions of Part 13 (protected species) and Part 13A (wildlife trade) of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), against the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition* (the Fisheries Guidelines). A public comment period was open from 4 September 2018 to 5 October 2018.

PQ Aquatics Syngnathids Wildlife Trade Operation

PQ Aquatics operates in Port Phillip Bay, Victoria. Management of the commercial fishery (operation¹) is based on input and output controls that include a small annual capped harvest; area and seasonal closures; hand collection by diving, monthly reporting to the Victorian Fisheries Authority (VFA), and collected syngnathids kept at the permit holder's premises.

Target stocks

The operation uses hand collection while diving to target Weedy Seadragons (*Phyllopteryx taeniolatus*), Short-headed Seahorses (*Hippocampus breviceps*) and Pot-bellied Seahorses (*Hippocampus abdominalis*). The species are in the family of fish Syngnathidae (syngnathids) which includes seahorses, pipefish and seadragons. The target species occur across southern Australia, and Pot-bellied Seahorse extends to New Zealand. A stock assessment has not been undertaken for this operation, however the current scale of the operation is very small and the target species are considered unlikely to be overharvested.

Protected species and ecosystems

As take is extremely low (4 individuals of each of the 3 species) and collection is by hand harvest, impacts on threatened; endangered and protected species; ecological communities and the marine environment are unlikely. Syngnathids are listed marine species under Part 13 of the EPBC Act. No specimens are taken from Commonwealth waters. Consequently, no interactions with protected species in Commonwealth waters are known to occur from the operation. The Hippocampus species are CITES II listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). A Non-Detriment Finding report by the Department concludes that the proposed operation is not likely to be detrimental to the survival of the species in the wild.

Ecosystem impacts

There is one Ramsar site in Port Phillip Bay, the Port Phillip Bay (Western Shoreline) and Bellarine Peninsula Ramsar Site. Collection is not expected to occur in the vicinity of the Ramsar site or to impact on the values of the site. Due to the benign harvesting method used in the operation (hand collection), impacts to the physical ecosystem are negligible. In addition, impacts on the foodweb are highly unlikely given that take of the target species is very limited.

Conclusion

Following assessment against the Fisheries Guidelines at Section 2, the PQ Aquatics Syngnathids Operation 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 PQ Aquatics Syngnathids Operation as an approved wildlife trade operation for three years until 14 December 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.

¹ The term 'operation', is used in commentary after this instead of 'fishery'. PQ Aquatics is an approved wildlife trade operation. It is a small activity collecting up to 4 individuals from 3 syngnathid species annually.

SECTION 1: ASSESSMENT SUMMARY OF THE VICTORIAN PQ AQUATICS SYNGNATHIDS WILDLIFE TRADE OPERATION 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	8/9	1/9	0/9	The management regime is effective PQ Aquatics operates under a state fisheries permit issued under Victorian Fisheries legislation. Operational and harvest reporting is provided to the state and Australian Government. With the management measures in place and low level of harvest there is a negligible likelihood of impacts on the target species and wider marine environment.
Principle 1 (target stocks)	7/8	1/8	0/8 (and 1 n/a)	Very low level harvest of target stocks While there hasn't been a stock assessment undertaken for the operation (1.1.5), and there are no reference points to trigger management action (1.1.6), the management measures in place limit take to a very low level (4 individuals from 3 syngnathid species annually). Given this the target species are considered unlikely to be overharvested.
Principle 2 (bycatch and TEPS)	6/6	0/6	0/6 (and 6 n/a)	No Bycatch and Unlikely to impact TEPS Bycatch and impacts on TEPs is unlikely due to the small scale and highly selective fishing method (hand collection).
Principle 2 (ecosystem impacts)	3/4	1/4	0/4 (and 1 n/a)	Very low risk of any ecosystem impact The impacts on ecosystems are likely to be negligible due to the operation's small scale and its highly selective fishing method (hand collection)
EPBC requirements	Meets	Partially meets	Does not meet	Details
Part 12			n/a	Not applicable - PQ Aquatics does not operate in Commonwealth waters.
Part 13			n/a	Not applicable - PQ Aquatics does not operate in Commonwealth waters.
Part 13A	11/11		8 n/a	The operation is consistent with the Objects of Part 13A. Declaration of the operation as a wildlife trade operation for three years, until 14 December 2021 is recommended, subject to conditions detailed in Section 4 of this report.
Part 16	All met			The operation is considered to be managed in a precautionary manner.

Notes:

Assessment history:

Information on previous assessments for the PQ Aquatics Syngnathids operation is available on the Department's website at: <http://www.environment.gov.au/marine/fisheries/vic/pqaquatics> .

1st assessment finalised December 2003 WTO with six conditions

2nd assessment finalised December 2009 – WTO with six conditions

3rd assessment finalised December 2012 – WTO with four conditions

4th assessment finalised December 2015 – WTO with four conditions and five recommendations

Fishery Reporting:

Annual reports

2016 [Annual Report](#) PQ Aquatics

2017 [Annual Report](#) PQ Aquatics

2018 Annual Report PQ Aquatics (due 31 December 2018)

Key links: Fishery information

Fishery information page on agency website - <https://vfa.vic.gov.au/science-in-fisheries/fisheries-management-and-science-branch>

South-east marine region profile: A description of the ecosystems, conservation values and uses of the South-east Marine Region, 2015 <http://www.environment.gov.au/system/files/resources/7a110303-f9c7-44e4-b337-00cb2e4b9bf/files/south-east-marine-region-profile.pdf> (Downloaded 14 November 2018)

Enforcing legislation

[Fisheries Act](#) 1995 (Victoria)

[Fisheries Regulations](#) 2009 (Victoria)

Ecological Risk Assessment

Department of the Environment (2015) Non-detriment finding for the export of *Hippocampus abdominalis* and *H. breviceps* from Victoria by PQ Aquatics (Commercial in confidence)

Port Phillip Bay Environmental Management Plan 2017–2027, Supporting Document, 2017 Department of Environment, Land, Water and Planning, East Melbourne.

https://www.water.vic.gov.au/_data/assets/pdf_file/0014/203360/PPBWS-and-BP-Ramsar-Site-Management-Plan.pdf

Other

Department of the Environment (2015). *Hippocampus abdominalis*, *Hippocampus breviceps*, *Phyllopteryx taeniolatus*: in Species Profile and Threats (SPRAT) Database, Department of the Environment, Canberra. Available from: <http://www.environment.gov.au/sprat>. Accessed Tue, 16 November 2018.

IUCN Redlist *Hippocampus breviceps*:

<https://www.iucnredlist.org/species/10063/54904334#assessment-information>

IUCN Redlist *Hippocampus abdominalis*:

<https://www.iucnredlist.org/species/10057/54903879#assessment-information>

IUCN Redlist *Phyllopteryx taeniolatus*: <https://www.iucnredlist.org/species/17177/67624517>

Martin-Smith, K.M. and Vincent, A.C.J. 2006. Exploitation and trade of Australian seahorses and their relatives (syngnathids). *Oryx* 40(2): 141-151.

Seahorses, Pipefishes and Their Relatives: A Comprehensive Guide to Syngnathiformes (Marine Fish Families), Rudie H. Kuiter (2001).

Port Phillip Bay Western Shoreline and Bellarine Peninsula Ramsar Site Management Plan, 2018 Department of Land, Water and Planning, Victoria

<http://www.ccma.vic.gov.au/Publications/Other-Strategies-Plans/Port-Phillip-Ramsar-Management-Plan.aspx>

Fishes of Australia - <http://fishesofaustralia.net.au/>

PQ Aquatics Mr Pang Quong Facebook page <https://www.facebook.com/pang.quong>

Port Phillip Bay – Marine Life Taxonomic Toolkit: <http://portphillipmarinelife.net.au/>

SECTION 2: DETAILED ANALYSIS OF THE VICTORIAN PQ AQUATICS SYNGNATHIDS WILDLIFE TRADE OPERATION 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 <p>The PQ Aquatics Syngnathids Wildlife Trade Operation (WTO) proposal, general information describing the management regime, and governing legislation (Victorian legislation) are available at the websites of the Australian Government Department of the Environment and Energy (the Department) and the Victorian Government legislative and Fisheries Authority (VFA) sites (links accessible in Section 1: Notes).</p>
Be developed through a consultative process providing opportunity to all interested and affected parties, including the general public.	Meets <p>A public notice, which set out the proposal to declare PQ Aquatics as an approved WTO and included the application from PQ Aquatics, was released for public comment on 4 September 2018 for a minimum of 20 business days. Approved wildlife trade operations are on the Department's website.</p>
Ensure that a range of expertise and community interests are involved in individual fishery management committees and during the stock assessment process.	Partially Meets <p>PQ Aquatics works closely with aquarium experts from the industry sector. This includes connections with the Melbourne Aquarium and USA public aquariums. Stock assessment expertise is reflected in management conditions in the protected aquatic biota permit from the VFA.</p>
Be strategic, containing objectives and performance criteria by which the effectiveness of the management arrangements are measured.	Meets <p>Performance measures in the PQ Aquatics Syngnathids WTO proposal include monthly operational and harvest reporting to the VFA. A condition on the PQ Aquatics WTO proposed declaration includes annual reporting requirements, which will allow the Department to monitor harvest.</p>
Be capable of controlling the level of harvest in the fishery using input and/or output controls.	Meets <p>The level of harvest is controlled through a quota (4 individuals from 3 species) specified in the VFA permit. Controls supporting this include permit conditions requiring notification to the VFA prior to harvest, lodgement of harvest collection reports and VFA site inspections</p>

Contain the means of enforcing critical aspects of the management arrangements.	Meets On board spot checks of stock and/or permits are undertaken by VFA fisheries officers, local police or water police during collection trips. The VFA also spot check the premises of PQ Aquatics.
Provide for the periodic review of the performance of the fishery management arrangements and the management strategies, objectives and criteria.	Meets Performance against the current PQ Aquatics Syngnathids WTO conditions has been reviewed and annual reports have been provided to the Department.
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.	Meets Due to the benign harvesting method and the extremely limited take, impacts on the wider marine ecosystem are negligible. Even so, monthly reports are provided to the VFA as part of the conditions of the VFA collection permit.
Requires compliance with relevant threat abatement plans, recovery plans, the National Policy on Fisheries Bycatch, and bycatch action strategies developed under the policy.	Meets There is negligible impact on bycatch, protected species and the ecosystem due to the benign method of harvest (hand collection). The PQ Aquatics Syngnathids Operation is compliant with relevant Commonwealth plans and policies.
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 Performance measures in the PQ Aquatics WTO proposal include monthly operational and harvest reporting to the VFA. A condition on the proposed PQ Aquatics Syngnathids WTO declaration includes annual reporting requirements, which will allow the Department to monitor harvest.
Assessment	

<p>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>	<p>Meets</p> <p>A stock assessment has not been undertaken for this operation. However, the current scale of the operation is very small and the target species are considered unlikely to be overharvested.</p>
<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>A stock assessment has not been undertaken for this operation. However, the syngnathids harvested in this operation are known to occur across southern Australia, and Pot-bellied Seahorse populations occur in both Australia and New Zealand. As the current scale of the operation is very small the target species are considered unlikely to be overharvested.</p> <p>Weedy Seadragon has been found in considerable abundance in isolated populations in Tasmania. At most reported locations in Australia, Pot-bellied Seahorse appears to be rare or scarce. At present, only rudimentary distribution data exist for Short-headed Seahorse and density of 0.21 adults per square metre is known from one study in Port Philip Bay. This area is noted for large Short-headed Seahorse populations and may not exhibit densities typical of most populations.</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 VFA permit for PQ Aquatics allows a maximum of 4 individuals of each of the 3 syngnathid species to be taken from state waters each year. Any other removals by other operators are undertaken under a VFA permit with quantities prescribed. The current scale of the operation is very small and the target species are considered unlikely to be overharvested.</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>While a stock assessment has not been undertaken for this operation in the Port Phillip Bay area the current scale of the operation is very small and the target species are considered unlikely to be overharvested.</p> <p>Pot-bellied Seahorse is a highly fecund species having estimated broods of several hundred young per breeding pair. For Short-headed Seahorse breeding pairs of up to 300 have been found to produce live young during the summer months when breeding is most common.</p>
<p>Management responses</p>	

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.	Partially Meets There is a maximum take of 4 individuals annually of the 3 syngnathid species. For Weedy Seadragon only one may be collected in any 48 hour period and they can only be taken from the wild during November to January. This low harvest is considered sustainable for Syngnathids. These management measures limit the level of harvest, however there are no species specific reference points that trigger further management actions for the operation.
1.1.7 There are management strategies in place capable of controlling the level of take.	Meets The level of take is controlled through management measures. This includes the VFA is required to be notified before any fishing operation commences, collection reports completed on site at completion of fishing operations which forms part of monthly returns, all syngnathids taken are retained at PQ Aquatics' premises, for Weedy Seadragon only one may be collected in any 48 hour period and they can only be taken from the wild during November to January. These measures are sufficient for the scale and method of the operation.
1.1.8 Fishing is conducted in a manner that does not threaten stocks of byproduct species.	Not applicable There are no byproduct species taken as part of the operation due to the selective fishing method used (hand collection).
(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 Given the fishing method and data collected for this operation, the management response has 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.	Not applicable No target stocks are currently considered to be overfished. No commercial harvest of syngnathids is allowed in Victorian waters. Their take is only permitted by permit for the purposes of research, aquaculture, and display by public institutions. A very limited take of Seahorse and Seadragon species is allowed by a small number of operators in Victorian waters for aquarium breeding operations. The VFA takes a precautionary approach to granting permits to take these species. There may be some incidental catch of sea dragon and seahorse species by other fishing operations such as trawl fisheries, however little or no bycatch has been reported to date.

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.	<p>Not applicable</p> <p>No target stocks are currently considered to be overfished.</p>
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.	<p>Meets</p> <p>Due to the highly selective fishing method (hand collection), there is no capture of bycatch.</p>
Assessment	
2.1.2 There is a risk analysis of the bycatch with respect to its vulnerability to fishing.	<p>Not applicable</p> <p>Due to the highly selective fishing method (hand collection), there is no capture of bycatch.</p>
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.	<p>Not applicable</p> <p>Due to the highly selective fishing method (hand collection), there is no capture of bycatch.</p>
2.1.4 An indicator group of bycatch species is monitored.	<p>Not applicable</p> <p>Due to the highly selective fishing method (hand collection), there is no capture of bycatch.</p>
2.1.5 There are decision rules that trigger additional management measures when there are significant perturbations in the indicator species numbers.	<p>Not applicable</p> <p>There are no specific decision rules that trigger additional management measures. This is appropriate given the negligible risk posed to the bycatch species.</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>Meets</p> <p>The management arrangements are likely to have a high chance of achieving the objective of fishing being conducted in a manner that does not threaten bycatch.</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 The applicant monitors Weedy Seadragon local population levels and their general behaviour via video recording. The prescribed harvest method (hand harvest) and the very small take (4 individuals of each species) reduces the risk of interaction with other protected species and communities to extremely low levels.
Assessments	
2.2.2 There is an assessment of the impact of the fishery on endangered, threatened or protected species.	Meets The applicant monitors Weedy Seadragon local population levels and general behaviour via video recording. The prescribed harvest method (hand harvest) and the very small take (4 individuals of each species) reduces the risk of impact to other protected species to extremely low levels.
2.2.3 There is an assessment of the impact of the fishery on threatened ecological communities.	Not Applicable There are no EPBC listed threatened ecological communities in the area of the operation.
Management responses	
2.2.4 There are measures in place to avoid capture and/or mortality of endangered, threatened or protected species.	Meets The applicant monitors Weedy Seadragon local population levels and their general behaviour via video recording. The VFA state government permit prohibits access to marine reserves and other marine protected areas. The prescribed harvest method (hand harvest) and the very small take (4 individuals of each species) reduces the risk of capture and/or mortality of protected species to extremely low levels.
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 in the area of the operation.
2.2.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	Meets Conditions imposed on the operation (low level and targeted harvest) are likely to ensure that fishing 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	

<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>The VFA permit requires data collection and reporting on harvest and location details. The undertakes underwater video recording and assesses the local population levels of syngnathids. There is no collection of information directly on the impact of the operation on the local ecosystem, however this is not required for such a small scale operation.</p> <p>The prescribed harvest method (hand selection) and the small take (4 individuals of each species annually) reduces the risk of the operation's impact to a very low level.</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>Partially Meets</p> <p>The VFA permit requires data collection and reporting on harvest and location details. The operator undertakes underwater video recording and assesses the local population levels of syngnathids. Information on the impact of the operation is not collected, therefore there is no data available to carry out risk analyses on the susceptibility of various ecosystem components.</p> <p>The prescribed harvest method (hand selection) and the small take (4 individuals of each species annually) reduces the risk of impact to a very low level.</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>The fishing method is unlikely to impact the ecosystem. Management measures include limited entry, spatial closures, low level of harvest and hand collection by diving to reduce potential damage to the ecosystem.</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>Not applicable</p> <p>There are no decision rules based on monitoring that trigger further management responses. The VFA state government permit held by the operator can be cancelled at any time in writing if considered necessary by the VFA. Impacts on the ecosystem from the operation are considered to be very low.</p>

2.3.5 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.

Meets

The management arrangements, considering precautionary management actions, appear to have a high chance in achieving the objective due to the harvest method of the operation (hand collection). Also, under the general management arrangements in place, the impact of this operation on the ecosystem is likely to be minimal.

SECTION 3: ASSESSMENT OF THE VICTORIAN PQ AQUATICS SYNGNATHIDS WILDLIFE TRADE OPERATION 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 operation 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	Not applicable The operation is in Victorian state waters (in Port Phillip Bay) and does not operate within Commonwealth waters where a bioregional plan is required.

Part 13 – Species and communities

PQ Aquatics operates in state waters only (in Port Phillip Bay, Victoria) therefore Part 13 accreditation is not applicable to this operation.

It does not operate within a Commonwealth marine bioregional plan area or where a bioregional plan is required. The impact of the operation in state waters (Victoria) on syngnathids and any other listed marine species is considered in Part 13A below.

The operation is managed under the Victorian *Fisheries Act 1995*, the *Fisheries Regulations 2009* and a Victorian Fisheries Authority Protected Aquatic Biota Permit.

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; (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
(3) The Minister must not issue a permit unless the Minister is satisfied that: (a) the action or actions specified in the permit will not be detrimental to, or contribute to trade which is detrimental to: (i) the survival of any taxon to which the specimen belongs; or	Meets Given the operation'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 operation, the Department considers that the PQ Aquatics Syngnathids operation 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 operation includes annual reporting

	requirements, which will allow the Department to monitor the status of CITES specimens harvested by the operation.
(ii) the recovery in nature of any taxon to which the specimen belongs; or	Meets The CITES specimens that are harvested as part of the operation are not considered to be over fished in Victoria. Management arrangements are in place to ensure that ongoing low levels of harvest are ecologically sustainable.
(iii) any relevant ecosystem (for example, detriment to habitat or biodiversity); and	Meets Recognising the nature of harvest (hand collection) by the operation, and the small scale (up to 4 individuals annually of each species) the potential for the operation to impact unacceptably and unsustainably on any relevant ecosystem generally is considered low. The Department is satisfied that the operation is managed in a way that minimises the impact of fishing operations on the ecosystem generally.
Section 303DC Minister may amend list (non CITES species)	Comment
(1) The Minister may, by legislative instrument, amend the list referred to in section 303DB [list of exempt native specimens] by: (a) doing any of the following: (i) including items in the list; (ii) deleting items from the list; (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.	Not applicable. The PQ Aquatics Syngnathids operation harvests only CITES and EPBC listed species (<i>Hippocampus abdominalis</i> and <i>H. breviceps</i>) and is therefore not eligible for listing on the LENS.
(1A) In deciding to amend the LENS, the Minister must rely primarily on outcomes an assessment under Part 10, Divisions 1 or 2	Not applicable The area in which PQ Aquatics operates (Port Phillip Bay) is not managed by the Commonwealth.
(1C) The above does not limit matters that may be considered when deciding to amend LENS.	Not applicable The PQ Aquatics Syngnathids operation includes harvest of CITES listed species and is therefore not eligible for listing on the LENS.
(3) Before amending the LENS, the Minister must consult: (a) other Minister or Ministers as appropriate; and	Not applicable The PQ Aquatics Syngnathids operation harvests only CITES and EPBC listed species and is therefore not eligible for listing on the LENS.

<p>(b) other Minister or Ministers of each State and self-governing Territory as appropriate; and</p> <p>(c) other persons and organisations as appropriate.</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>Meets</p> <p>The PQ Aquatics Syngnathids operation is eligible for declaration as an approved wildlife trade operation.</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 PQ Aquatics Syngnathids operation is consistent with Objects of 13A – see assessment against the Guidelines (Section 2).</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 PQ Aquatics Syngnathids operation 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, low level of harvest and hand collection.</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>Not applicable</p> <p>The EPBC Regulations 2000 do not specify syngnathids as a class of animal that can be considered in relation to the welfare 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>Not applicable</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>(a) the significance of the impact of the operation on an ecosystem (for example, an impact on habitat or biodiversity); and</p>	<p>Meets</p> <p>The PQ Aquatics Syngnathids operation 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 restrictions on the number of syngnathid species permitted to be collected in Victoria, hand collection by diving, area restrictions and record keeping and reporting requirements.</p>
<p>(b) the effectiveness of the management arrangements for the operation (including monitoring procedures).</p>	<p>Meets</p>

	The management arrangements that will be employed for the PQ Aquatics operation, as outlined in section (4) above are likely to be effective.
<p>(5) In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have regard to:</p> <p>(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</p> <p>(b) whether the legislation applies throughout the State or Territory concerned; and</p> <p>(c) whether, in the opinion of the Minister, the legislation is effective.</p>	<p>Meets</p> <p>The PQ Aquatics Syngnathids operation will be managed under the following legislation: <i>Fisheries Act 1995</i> (Victoria) and the <i>Fisheries Regulations 2009</i> (Victoria).</p> <p>The <i>Fisheries Act 1995</i> (Victoria) applies throughout Victorian waters.</p> <p>The Department considers that the legislation is likely to be effective.</p>
<p>(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:</p> <p>(a) the operation is a small scale operation.</p>	<p>Meets</p> <p>The PQ Aquatics Syngnathids wildlife trade operation is a small scale operation.</p>
<p>(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.</p>	<p>Not applicable</p> <p>No assessment of the PQ Aquatics Syngnathids operation has been carried out under Part 10 of the EPBC Act as it is not a Commonwealth managed fishery.</p>
<p>(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.</p>	
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> <p>(a) setting out the proposal to make the declaration; and</p> <p>(b) setting out sufficient information to enable persons and organisations to consider adequately the merits of the proposal; and</p> <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>Meets</p> <p>A public notice, which set out the proposal to declare the PQ Aquatics Syngnathids operation an approved wildlife trade operation, and included the application from PQ Aquatics, was released for public comment on 4 September 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</p>	No public comments about the proposal were received.

	make the declaration that were given in response to the invitation in the notice.	
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 PQ Aquatics Syngnathids Wildlife Trade Operation will be made under section 303FN.
(4)	<p>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 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 PQ Aquatics specifies the standard and any additional conditions be 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 PQ Aquatics Syngnathids operation 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 – Precautionary principle and other considerations in making decisions

Section 391 Minister must consider precautionary principle in making decisions		Comment
(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.	Meets Given the various management arrangements including: limited entry and spatial closures, precautionary measures are considered to be in place to prevent serious or irreversible environmental damage being caused by this operation.
(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.	

SECTION 4: ASSESSMENT OF THE VICTORIAN PQ AQUATICS SYNGNATHIDS WILDLIFE TRADE OPERATION – SUMMARY OF ISSUES REQUIRING CONDITIONS

Issue	Condition
<p><u>General Management</u> 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: Export of syngnathid species is restricted to specimens held or taken under permits issued by the Victorian Fisheries Authority, and offspring of these specimens.</p> <p>Condition 2: PQ Aquatics to inform the Department of the Environment and Energy of any intended material changes (i) to the conditions on permits issued by the Victorian Fisheries Authority, and/or (ii) to the operating arrangements of the facility,</p> <p>or other changes to management arrangements for the operation that may affect the assessment against which <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) decisions are made.</p>
<p><u>Annual Reporting</u> 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: By December of each year annual reports are to be provided by PQ Aquatics to the Department of the Environment and Energy and should include:</p> <p>(i) total harvest, including species, location, quantities, size, reproductive state and sex of individuals collected (ii) results of spawning, mating and rearing trials and the number of mortalities that have occurred (iii) quantities and numbers of specimens for each species sold or held as stocks.</p>
<p><u>Protection of wild syngnathid populations</u> The release of wild caught syngnathids back into the environment from where they came from has been found to increase the risk of introducing disease into wild populations. Disease is not uncommon in captive fish, and although it is difficult to quantify the level of this risk, the Department considers that returning syngnathids back into the wild poses an unacceptable risk at this time, and should be prohibited.</p>	<p>Condition 4: Wild caught and cultured syngnathids are not to be returned to the wild.</p>

