



Australian Government

Department of Sustainability, Environment, Water, Population and Communities

Assessment of the
PQ Aquatics Operation

December 2012

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Disclaimer

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

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Table 1: Summary of the PQ Aquatics operation

<p>Publicly available information relevant to the fishery</p>	<ul style="list-style-type: none"> • <i>Fisheries Act 1982 (Victoria)</i> • <i>Fisheries (General) Regulations 2000 (Victoria)</i> • <i>Fisheries Act 1995 (South Australia)</i> • <i>Fisheries (General) Regulations 2000 (South Australia)</i> • <i>Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)</i> • Environment Australia – Declaration of an Approved Wildlife Trade Operation – 2003 • Department of the Environment and Heritage – Declaration of an Approved Wildlife Trade Operation – 2006 • Department of the Environment, Water, Heritage and the Arts – Declaration of an Approved Wildlife Trade Operation – 2009 • Department of Sustainability, Environment, Water, Population and Communities – Declaration of an Approved Wildlife Trade Operation – 2012
<p>Area</p>	<p>Victorian state waters (near shore) in Port Phillip Bay and South Australian state waters (near shore). Collection of specimens is undertaken away from areas easily accessed by the public.</p>
<p>Target Species</p>	<p>Leafy sea dragons <i>Phycodurus eques</i> (from South Australian waters only), weedy sea dragons <i>Phyllopteryx taeniolatus</i>, short headed seahorses <i>Hippocampus breviceps</i>, pot bellied seahorses <i>Hippocampus abdominalis</i> and pipefish (from Victorian waters).</p> <p>Biology</p> <p><i>Hippocampus abdominalis</i> (pot bellied seahorse) <i>H. abdominalis</i> can be found in the shallow estuarine waters on kelp encrusted reefs, or attached to sponges in deeper (>20m) tidal channels (Kuitert, 2001). The species has been reported from coastal waters in New South Wales, Victoria, Tasmania and South Australia, as well as in parts of New Zealand (Lourie et al, 1999; Kuitert, 2001, Lourie et al, 2004). The extent of <i>H. abdominalis</i> may overlap with the closely related <i>H. bleekeri</i>, which is also found in South Australian waters (Kuitert, 2001). <i>H. abdominalis</i> is a highly fecund species having estimated broods of several hundred young per breeding pair. (Pogonoski et al. 2002). The longevity and maximum size of <i>H. abdominalis</i> is unknown (IUCN, 2012).</p> <p><i>Hippocampus breviceps</i> (short headed seahorse). <i>H. breviceps</i> can be found in sheltered coastal reef systems in the southern parts of Australia from Port Phillip Bay, Victoria around to the Spencer Gulf in South Australia and has also been found in eastern Tasmania (Kuitert, 1996). Breeding pairs of <i>H. breviceps</i> have been found to produce up to 300 live young during the summer months when breeding is most common (Kuitert, 1993 and 2000). <i>H. breviceps</i> grows to a maximum size of around 12cm in length and reaches sexual maturity at around 6 months of age (Kuitert, 1996). The species is considered data poor with no estimate of longevity (IUCN, 2012)</p> <p><i>Phycodurus eques</i> (leafy seadragon) <i>P. eques</i> can be found in shallow (<20m) kelp beds from south-east Western Australia eastward to southern parts of Victoria. <i>P. eques</i> are most common, however, in Western and South Australian waters (Scott, et al., 1974 and Kuitert, 1993). Breeding pairs of <i>P. eques</i> are known to have up to 250-300 young in each of two broods during the</p>

	<p>warmer months (Kuitert, 1988). <i>P. eques</i> commonly grows to a maximum size of 35cm (Kuitert, 1993); although some individuals have been recorded to 43cm (Hutchins and Swainston, 1986). The age at sexual maturity is unknown (Dawson, 1985) and due to lack of data on the species, an estimation of longevity has not been established (IUCN, 2012).</p> <p><i>Phyllopteryx taeniolatus</i> (weedy seadragon) <i>P. taeniolatus</i> can be found in coastal waters over rocky reefs, algal beds, seagrass meadows and around jetty pylons (Coleman, 1980). The species has a known distribution from Port Stephens in New South Wales around to Geraldton in Western Australia and has been found in isolated populations in Tasmania (Scott et al., 1974; Colman, 1980; Edgar et al., 1982). <i>P. taeniolatus</i> pairs can have between 80-250 young in a brood and while usually only having one brood per season, two broods have been observed on occasion (Kuitert, 1993, 2000; Booth & Sanchez-Camara, 2008). <i>P. taeniolatus</i> can live up to 10 years in captivity and 6 years in the wild, whilst growing to a maximum size of at least 46cm, with sightings of larger specimens in Tasmania (Scott et al., 1974).</p>
Fishery status	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.
Byproduct Species	None, due to the highly selective method of collection.
Gear	Hand collection by scuba diving from a boat in 60 minute intervals.
Season	Unrestricted, except for weedy sea dragons (<i>P. taeniolatus</i>), which can only be collected during the months of November to January.
Commercial harvest	There have been fewer than five syngnathids collected annually by this operation since 2009.
Value of commercial harvest	Due to the small number of operators in this fishery, this information cannot be published.
Take by other sectors	There is no targeted catch of any seahorse or seadragon species allowed by other sectors within the area where the PQ Aquatics operation collects these animals. There may be some incidental catch of <i>Hippocampus</i> species by other fishing operations, however no bycatch has been reported to date.
Commercial licences issued	Two state permits for the one operator (one permit from Victoria and one from South Australia).
Management arrangements	<p>Victorian and South Australian state permits outline the management arrangements for PQ Aquatics.</p> <p><u>Victorian management arrangements:</u></p> <ul style="list-style-type: none"> • a maximum of 10 individuals of each syngnathid species may be taken from state waters each year • all syngnathids taken to be retained at the permit holder's premises • weedy sea dragons can only be collected from November to January each year • no syngnathid species to be taken within 400m of Portsee Pier or within 100m of any other pier/jetty

	<ul style="list-style-type: none"> monthly reporting to Fisheries Victoria, and Fisheries Victoria are required to be notified before any fishing operation commences. <p><u>South Australian management arrangements:</u></p> <ul style="list-style-type: none"> collection limited to one egg bearing male leafy sea dragon each year from state waters specimens collected must be retained Department of Primary Industries, or Primary Industries and Resources of South Australia (PIRSA) are required to be notified before any fishing operation commences reporting requirements, and restriction on taking specimens within one nautical mile of jetties at Rapid Bay and Second Valley.
Export	Captive bred offspring of the target species are raised for domestic public aquariums and exported overseas to public aquariums and educational institutes (e.g. Japan and USA). No offspring are exported for the purposes of fresh food, the dried food industry or as dried souvenirs.
Bycatch	None.
Interaction with Protected Species¹	While syngnathids are listed marine species under Part 13 of the EPBC Act, none are taken from Commonwealth waters. Consequently, no interactions with protected species in Commonwealth waters are known to occur in the operation of PQ Aquatics.
Ecosystem Impacts	Due to the benign harvesting method used in the fishery (hand collection), impacts to the physical ecosystem are negligible. In addition, impacts on the foodweb are unlikely given that take of the target species is very limited.
Impacts on CITES species	The assessment also considered the possible impacts on species harvested in the PQ Aquatics operation which are listed under the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES). As a party to the Convention, Australia must apply all CITES provisions of the EPBC Act to <i>Hippocampus breviceps</i> and <i>Hippocampus abdominalis</i> imports and exports as appropriate. Under these provisions, export of CITES specimens may only occur where a permit, supported by a non-detriment finding (Department of Sustainability, Environment, Water, Population and Communities 2012), has been issued by the CITES Management Authority of the country of export. As Part 13A of the EPBC Act incorporates the requirements of CITES, there are no changes to the criteria for export approval, aside from administrative changes to the permits issued. As a result of the listing, specimens of <i>Hippocampus breviceps</i> and <i>Hippocampus abdominalis</i> taken from the wild or bred in captivity may only be exported under either a single or multiple use CITES permit.

¹ 'Protected species' means all species listed under Part 13 of the EPBC Act, including whales and other cetaceans and threatened, marine and migratory species.

Table 2: Progress in implementation of conditions made in the previous assessment of the PQ Aquatics operation

Condition	Progress	Recommended Action
1. Export of syngnathid species is restricted to specimens held or taken under permits issued by Fisheries Victoria Division of the Department of Primary Industries, or Primary Industries and Resources South Australia and their offspring.	All syngnathid species have been collected by PQ Aquatics under permits issued by Fisheries Victoria Division of the Department of Primary Industries, or Primary Industries and Resources South Australia.	<p>The department considers that this condition is being met.</p> <p>The department recommends that a new approved wildlife trade operation declaration for the PQ Aquatics operation specify a similar condition (see Condition 1, Table 4).</p>
2. PQ Aquatics to advise the Department of the Environment, Water, Heritage and the Arts (DEWHA) of any intended change to the legislated permit conditions or operating arrangements of the facility that could affect the criteria on which <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) decisions are based.	There have been no amendments or changes to permit conditions since the last assessment.	<p>The department considers that this condition is being met.</p> <p>The department recommends that a new approved wildlife trade operation declaration for the PQ Aquatics operation specify a similar condition (see Condition 2, Table 4).</p>
3. Harvest of syngnathids is prohibited in Commonwealth waters.	There has been no take of syngnathids in Commonwealth waters.	<p>The department considers that this condition is being met.</p> <p>The department recommends that this condition not be specified on any new wildlife trade operations, as the removal of syngnathids from Commonwealth waters is prohibited under the EPBC Act and is not required on the wildlife trade operation.</p>

Condition	Progress	Recommended Action
4. Wild caught and cultured syngnathids are not to be returned to the wild.	PQ Aquatics have advised the department that no wild caught and cultured syngnathids have been returned to the wild.	<p>The department considers that this condition is being met.</p> <p>The department recommends that a new approved wildlife trade operation declaration for the PQ Aquatics operation specify a similar condition (see Condition 4, Table 4).</p>
5. PQ Aquatics to breed <i>Hippocampus breviceps</i> and <i>Hippocampus abdominalis</i> in captivity as specified by the Environment Protection and Biodiversity Conservation Regulations 2000.	<p>PQ Aquatics have advised the department that <i>Hippocampus breviceps</i> and <i>Hippocampus abdominalis</i> have been bred in captivity since the last assessment.</p> <p>PQ Aquatics have provided breeding data to the department on a yearly basis since the last assessment.</p>	<p>The department considers that this condition is being met.</p> <p>The department recommends that this condition not be specified on any new wildlife trade operations as the captive breeding of <i>Hippocampus</i> spp. is legislated under the EPBC Regulations, therefore a condition is not required.</p>

Condition	Progress	Recommended Action
<p>6. Annual reports are to be provided by PQ Aquatics to DEWHA and should include:</p> <ul style="list-style-type: none"> - total harvest; including species, location, quantities, size, reproductive state and sex of individuals collected; - results of spawning, mating and rearing trials and the number of mortalities that have occurred; - quantities and numbers of specimens for each species sold or held as stocks; and - details of the reproductive success of the operation as agreed between PQ Aquatics and DEWHA 	<p>PQ Aquatics provides the department with annual reports that detail the information set out in the condition.</p>	<p>The department considers that this condition is being met.</p> <p>The department recommends that a new approved wildlife trade operation declaration for the PQ Aquatics operation specify a similar condition (see Condition 3, Table 4).</p>

Table 3: The Department of Sustainability, Environment, Water, Population and Communities' assessment of the PQ Aquatics operation against the requirements of the EPBC Act related to decisions made under Part 13A.

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

Part 13A

Section 303BA Objects of Part 13A
<p>(1) The objects of this Part are as follows:</p> <ul style="list-style-type: none"> (a) to ensure that Australia complies with its obligations under CITES² 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.

² Convention on International Trade in Endangered Species of Wild Fauna and Flora

Part 13A

Section 303 CG Minister may issue permits (CITES species)	The department's assessment of the PQ Aquatics operation
<p data-bbox="168 194 1115 258">(3) The Minister must not issue a permit unless the Minister is satisfied that:</p> <ul style="list-style-type: none"><li data-bbox="224 290 1115 354">(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"><li data-bbox="268 386 1115 434">i. the survival of any taxon to which the specimen belongs; or<li data-bbox="268 657 1115 721">ii. the recovery in nature of any taxon to which the specimen belongs; or<li data-bbox="268 833 1115 896">iii. any relevant ecosystem (for example, detriment to habitat or biodiversity).	<p data-bbox="1124 386 2069 625">Given the very low level of take by the operation, the department considers that the PQ Aquatics operation will not be detrimental to the survival of any taxon to which the CITES specimens belong in the short to medium term. A condition on the wildlife trade operation declaration for the PQ Aquatics operation includes annual reporting requirements, which will allow the department to monitor the harvest of CITES specimens from the fishery.</p> <p data-bbox="1124 657 2069 801">The CITES specimens harvested from the operation are not considered to be overfished in Victoria and South Australia. Management arrangements are in place to ensure that ongoing low levels of harvest are ecologically sustainable.</p> <p data-bbox="1124 833 2069 1040">Recognising the nature of harvest and gear used (hand collection) in the operation, the potential for the PQ Aquatics operation to impact unacceptably and unsustainably on any relevant ecosystem generally is considered quite low. The department is satisfied that the operation is conducted in a manner that minimises the impact of fishing on the ecosystem and will not be detrimental to any relevant ecosystem.</p>

Section 303FN Approved wildlife trade operation	The department's assessment of the PQ Aquatics operation
(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>(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>(b) the operation will not be detrimental to:</p> <ol style="list-style-type: none"> i. the survival of a taxon to which the operation relates; or ii. the conservation status of a taxon to which the operation relates; and <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>The department considers that the PQ Aquatics operation is consistent with the objectives of Part 13A (listed above) as:</p> <ul style="list-style-type: none"> ▪ there are management arrangements in place to ensure that the resource is being managed in an ecologically sustainable way (see Table 1) ▪ the PQ Aquatics operation is unlikely to be unsustainable or threaten biodiversity within the next 3 years, and ▪ the EPBC Regulations do not specify syngnathids as a class of animal in relation to the welfare of live specimens. <p>The department considers that the PQ Aquatics operation will not be detrimental to the survival or conservation status of a taxon to which it relates within the next 3 years, given the management measures currently in place, which include:</p> <ul style="list-style-type: none"> ▪ it is an operation that can collect a maximum of four short headed and pot bellied seahorses and 10 weedy seadragon specimens per year from Victorian waters and one male egg-bearing leafy seadragon from South Australian waters, as per state permit conditions; ▪ it does not harvest any syngnathid specimens from Commonwealth waters; ▪ the operation must not return any wild caught or captive bred specimens back to the wild; ▪ it is an operation that has continued sustainably for longer than ten years and is therefore unlikely to be unsustainable and threaten biodiversity within the next 3 years; ▪ there is negligible impact on bycatch, protected species and the ecosystem due to the benign method of harvest (hand collection); ▪ the department has developed conditions for the wildlife trade

<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>(d) such other conditions (if any) as are specified in the regulations have been, or are likely to be, satisfied.</p>	<p>operation declaration, in addition to state permit conditions;</p> <ul style="list-style-type: none"> ▪ the EPBC Regulations do not specify syngnathids as a class of animal in relation to the welfare of live specimens; and ▪ from 1 January 2010 to the date of this assessment, all conditions set by the department have been met by PQ Aquatics, including annual reporting requirements. <p>In addition, the protection of syngnathids under state legislation in both Victoria and South Australia requires state fisheries management authorities to be precautionary in issuing harvest permits.</p> <p>Management measures currently in place under state permit conditions include restrictions on the number of syngnathid species permitted to be collected in each state, a prohibition on returning wild caught specimens back to the wild (ensuring wild populations are protected against the introduction of aquarium-born diseases), area restrictions and record keeping and reporting requirements. In addition, the department has developed conditions to be met by PQ Aquatics as part of their wildlife trade operation declaration including a prohibition on the harvesting of syngnathids in Commonwealth waters.</p> <p>PQ Aquatics has also provided comprehensive information that demonstrates that the operation captive breeds the two species of <i>Hippocampus</i> species to at least the second generation in accordance with the EPBC Regulations. Only a limited number of syngnathid specimens are collected from the wild to ensure ongoing genetic viability. The department considers the removal of such a small number of specimens is extremely unlikely to be detrimental to the survival of the species in the wild.</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>The department considers that the PQ Aquatics will not have a significant impact on any relevant ecosystem within the next 3 years, given the management measures currently in place, which include restrictions on the number of syngnathid species permitted to be</p>

<p>(b) the effectiveness of the management arrangements for the operation (including monitoring procedures).</p>	<p>collected in each state, a prohibition on returning wild caught specimens back to the wild (ensuring wild populations are protected against the introduction of aquarium-borne diseases), area restrictions and record keeping and reporting requirements.</p> <p>The department considers that these management arrangements are likely to be effective.</p>
<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>The PQ Aquatics operation will operate in accordance with permit conditions issued under relevant state permits. The South Australian Ministerial exemption is in force under section 59 of the South Australian <i>Fisheries Act 1982</i> and the <i>Fisheries (General) Regulations 2000</i>, while the Victorian state permit is in force under the Victorian <i>Fisheries Act 1995</i>.</p> <p>The South Australian <i>Fisheries Act 1982</i> applies throughout South Australia. The Victorian <i>Fisheries Act 1995</i> applies throughout Victoria.</p> <p>The department considers that the relevant legislation is effective for the current scale of operation.</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>(d) the operation is a commercial fishery.</p>	<p>The PQ Aquatics operation is a commercial fishery.</p>

Section 303FR Public consultation	The department's assessment of the PQ Aquatics operation
<p>(1) Before making a declaration under section 303FN, the Minister must cause to be published on the Internet a notice:</p> <ul style="list-style-type: none"> (a) setting out the proposal to make the declaration; and (b) setting out sufficient information to enable persons and organisations to consider adequately the merits of the proposal; and (c) inviting persons and organisations to give the Minister, within the period specified in the notice, written comments about the proposal. 	<p>The department considers that the consultation requirements of the EPBC Act for declaring an operation an approved wildlife trade operation have been met. A public notice, which set out the proposal to declare the PQ Aquatics operation an approved wildlife trade operation and included the submission, was released for public comment for a period of greater than 20 days, with no submissions received.</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>A public notice, which set out the proposal to declare the PQ Aquatics operation a wildlife trade operation and included the submission, was released for public comment on 10 September 2012 and closed on 12 October 2012, a total of 23 business days.</p>
<p>(3) In making a decision about whether to make a declaration under section 303FN, the Minister must consider any comments about the proposal to make the declaration that were given in response to the invitation in the notice.</p>	<p>No public comments about the proposal were received.</p>
Section 303FT Additional provisions relating to declarations	The department's assessment of the PQ Aquatics operation
<p>(1) This section applies to a declaration made under section 303FN, 303FO or 303FP.</p>	<p>A declaration for the PQ Aquatics operation 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> <ul style="list-style-type: none"> (a) during a particular period; or (b) while certain circumstances exist; or (c) while a certain condition is complied with. <p>In such a case, the instrument of 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 PQ Aquatics operation specifies the standard and any additional conditions applied.</p>

(8) A condition may relate to reporting or monitoring.	One of the standard conditions relates to reporting.
(9) The Minister must, by instrument published in the <i>Gazette</i> , revoke a declaration if he or she is satisfied that a condition of the declaration has been contravened.	
(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 operation made under section 303FN and the conditions under section 303FT will be gazetted and made available on the department's website.

Part 16

Section 391 Minister must consider precautionary principle in making decisions	The department's assessment of the PQ Aquatics operation
(1) The Minister must take account of the precautionary principle in making a decision under section 303DC and/or section 303FN, to the extent he or she can do so consistently with the other provisions of this Act.	The precautionary principle has been taken into account when recommending that the PQ Aquatics operation be declared an approved wildlife trade 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.	

The Department of Sustainability, Environment, Water, Population and Communities' final conditions to PQ Aquatics for the PQ Aquatics operation

The material submitted by PQ Aquatics demonstrates that the management arrangements for the PQ Aquatics operation continue to meet the requirements of the Australian Government 'Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition'. The operation is managed under a Victorian harvest permit issued under the *Fisheries Act 1995* and a South Australian Ministerial exemption from general prohibition of harvest of these species in South Australia. These state management arrangements include a restriction on the number of syngnathid specimens permitted to be collected, area restrictions, a condition that collected specimens must not be returned to the wild, and notification and reporting requirements.

These management arrangements should enable the operation to be ecologically sustainable in the short to medium term. Species are not currently judged to be over-fished and these management arrangements provide the basis to ensure that fishing is conducted in a manner that will not lead to over-fishing.

The PQ Aquatics operation is classified as a small scale operation under Part 9A.20 of the EPBC Act which defines a small scale operation as one that has a low impact on the survival or conservation status of the taxon because: a small area is harvested; the number of participants is small; and the number of specimens harvested is small.

Ecosystem Impacts

Taking into account the management measures described above, the department considers that the management regime for the PQ Aquatics operation provides for fishing operations to be managed to minimise impact on the structure, productivity, function and biological diversity of the ecosystem. This includes complying with all Convention on International Trade in Endangered Species (CITES) provisions of the EPBC Act, which apply to the seahorse species harvested by this operation. The Australian CITES Scientific Authority for Marine Species completed a non-detriment finding to inform the minister's (or the minister's delegate) consideration of this matter for individual decisions about whether to grant an export permit for *Hippocampus breviceps* and *H. abdominalis*. The non-detriment finding concluded that PQ Aquatics' take of *Hippocampus sp.* from Victorian waters will not be detrimental to the species or the ecosystem in which it lives.

The department considers that declaration of the harvest operations of PQ Aquatics as an approved wildlife trade operation for three years, until 17 December 2015, is appropriate. The department considers that the declaration should be subject to the conditions listed in Table 4.

Unless a specific time frame is provided, each condition must be addressed within the period of the declaration.

Table 4: PQ Aquatics operation assessment – Summary of Issues, Conditions December 2012

	Issue	Conditions
1	<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 Sustainability, Environment, Water, Population and Communities (DSEWPaC) 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: Export of syngnathid species is restricted to specimens held or taken under permits issued by Fisheries Victoria Division of the Department of Primary Industries, or Primary Industries and Resources South Australia, and offspring of these specimens.</p> <p>Condition 2: PQ Aquatics to advise the Department of Sustainability, Environment, Water, Population and Communities of any changes:</p> <ul style="list-style-type: none"> - to the permit conditions on permits issued by Fisheries Victoria Division of the Department of Primary Industries, or Primary Industries and Resources South Australia, and/or - any changes to operating arrangements of the facility <p>that could affect the criteria on which <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) decisions are based.</p>

2	<p><u>Annual Reporting</u></p> <p>It is important that reports be produced and presented to the department annually in order for the performance of the fishery and progress in implementing the conditions in this report and other managerial commitments to be monitored and assessed throughout the life of the declaration. Annual reports should follow Appendix B to the '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 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/coasts/fisheries/publications/guidelines.html</p>	<p>Condition 3:</p> <p>By December of each year annual reports are to be provided by PQ Aquatics to the Department of Sustainability, Environment, Water, Population and Communities and should include:</p> <ul style="list-style-type: none"> - total harvest, including species, location, quantities, size, reproductive state and sex of individuals collected - results of spawning, mating and rearing trials and the number of mortalities that have occurred - quantities and numbers of specimens for each species sold or held as stocks, and - details of the reproductive success of the operation as agreed between PQ Aquatics and the Department of Sustainability, Environment, Water, Population and Communities.
3	<p><u>Protection of wild syngnathid populations</u></p> <p>The release of wild caught syngnathids back into the environment from which they came from has been found to increase the risk of introducing disease into wild populations. While 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:</p> <p>Wild caught and cultured syngnathids are not to be returned to the wild.</p>

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Acronyms

CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DEWHA	(Commonwealth) Department of the Environment, Water, Heritage and the Arts
EPBC Act	<i>Environment Protection Biodiversity Conservation Act 1999</i>
DSEWPaC	(Commonwealth) Department of Sustainability, Environment, Water, Population and Communities.