



**Australian Government**

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**Department of Sustainability, Environment, Water, Population and Communities**

Assessment of the  
**Queensland Marine Aquarium Fish Fishery**

**November, 2011**

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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 – 2<sup>nd</sup> 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 Parts 13 and 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 Queensland Marine Aquarium Fish Fishery**

<p><b>Description of the fishery</b></p>	<p>The Queensland Marine Aquarium Fish Fishery (QMAFF) is a hand collection fishery that harvests fish and invertebrates for display purposes from Queensland and Commonwealth waters off the east coast of Queensland, including the Great Barrier Reef Marine Park. Under an Offshore Constitutional Settlement agreement between the Australian Government and the Queensland Government, the fishery is managed by Fisheries Queensland under the Queensland <i>Fisheries Act 1994</i> and the Queensland <i>Fisheries Regulation 2008</i>.</p>
<p><b>Publicly available information relevant to the fishery</b></p>	<ul style="list-style-type: none"> <li>• Queensland <i>Fisheries Act 1994</i></li> <li>• Queensland <i>Fisheries Regulation 2008</i></li> <li>• <i>Great Barrier Reef Marine Park Act 1975</i></li> <li>• Queensland <i>Marine Parks Act 1982</i></li> <li>• Queensland <i>Fisheries (Coral Reef Fin Fish) Management Plan 2003</i></li> <li>• A guide to the Queensland Marine Aquarium Fish Fishery and the Queensland Coral Fishery. Queensland Primary Industries and Fisheries.</li> <li>• Performance Measurement System Queensland Marine Aquarium Fish Fishery, April 2009. Queensland Primary Industries and Fisheries.</li> <li>• Ecological Risk Assessment of the Queensland Marine Aquarium Fish Fishery, 2008</li> <li>• A sustainability assessment of marine fish species collected in the Queensland marine aquarium trade. Department of Primary Industry and Fisheries, 2008.</li> <li>• Department of the Environment, Water, Heritage and the Arts, Assessment Report of the Queensland Marine Aquarium Fish Fishery November 2008.</li> <li>• Marine Aquarium Fish Fishery 2011 – Progress against the SEWPac conditions and recommendations</li> <li>• Annual Status Report 2011 – Queensland Marine Aquarium Fish Fishery</li> <li>• Annual Status Report 2010 – Queensland Marine Aquarium Fish Fishery</li> <li>• Annual Status Report 2009 – Queensland Marine Aquarium Fish Fishery</li> <li>• Annual Status Report 2008 – Queensland Marine Aquarium Fish Fishery</li> <li>• Stewardship Action Plan. Pro-vision Reef, 2009</li> <li>• Climate Change Vulnerability Assessment: Queensland Marine Aquarium Supply Industry, 2010. Great Barrier Reef Marine Park Authority Publication No.108.</li> </ul>

<p><b>Area</b></p>	<p>The QMAFF operates in Queensland and Commonwealth waters off the Queensland east coast, from the tip of Cape York south to the New South Wales border. The majority of commercial aquarium fish collecting occurs in coastal and reef waters in northern Queensland, within the Great Barrier Reef Marine Park.</p> <p>The fishery is open to holders of a Commercial Harvest Fishery Licence endorsed with an 'A1' or 'A2' fishery symbol. The fishery area includes five special management areas that can only be accessed by certain holders of an A1 fishery symbol (see Management Arrangements). Allocation of access to these areas was undertaken in 2003, based on a licensee's historic participation in the region, to manage harvest in areas of potential high use adjacent to major population centres and within easy reach of international airports. The remainder of the fishery area is open to both A1 and A2 symbol holders.</p>
<p><b>Fishery status</b></p>	<p>The stock status of QMAFF species has not been formally assessed.</p> <p>Fisheries Queensland undertook a sustainability assessment of QMAFF species and an ecological risk assessment for the fishery in 2008. As a result of the ecological risk assessment, apart from two angelfish species ranked as being at medium risk, all species were classified as being at negligible or low risk from fishing in the QMAFF.</p>
<p><b>Target Species</b></p>	<p>There is a large range of marine fish and invertebrate species that are available for harvest from the QMAFF for private or public aquarium displays. In 2010 there were at least 47 different species groups collected. Fish families commonly harvested in the QMAFF include:</p> <ul style="list-style-type: none"> <li>• damselfish and anemone fish (Family <i>Pomacentridae</i>);</li> <li>• butterflyfish and bannerfish (Family <i>Chaetodontidae</i>);</li> <li>• angelfish (Family <i>Pomacanthidae</i>);</li> <li>• wrasses (Family <i>Labridae</i>); and</li> <li>• gobies (Family <i>Gobiidae</i>).</li> </ul>
<p><b>Byproduct Species</b></p>	<p>While the QMAFF does not distinguish between target and byproduct species, the fishery collects individuals from a potential pool of up to 600 species of reef fish and invertebrates.</p>
<p><b>Gear</b></p>	<p>Aquarium fish are commercially harvested by hand with the use of hand-held apparatus, fishing lines (with a single barbless hook), cast nets, scoop nets, seine/barrier nets and/or herding devices (for example, a small rod). Divers in the commercial fishery are aided by self-contained underwater breathing apparatus (SCUBA) or surface-supplied air from hookah apparatus, allowing for extended time underwater and increased mobility for fish harvesting.</p> <p>Recreational harvesters cannot legally use SCUBA or hookah apparatus, but may use a mask and snorkel.</p>
<p><b>Season</b></p>	<p>The fishing season for the QMAFF is year round, however two five-day spawning closures in October and November apply for coral reef fin fish as defined in the <i>Fisheries (Coral Reef Fin Fish) Management Plan 2003</i>.</p>

<b>Commercial harvest</b>	The commercial harvest for 2010 was reported as 134,206 individuals from 47 species groups. This is similar to the average yearly take for the period from 2008 to 2010.
<b>Value of commercial harvest</b>	There were no gross value of production (GVP) estimates for the fishery in 2010. However, the combined estimate for both the QMAFF and the Queensland Coral Fishery was \$10-12 million in the financial year 2008-2009. Fisheries Queensland advise that the small size of the fishery, its multi-species focus and variations in market prices make it difficult to accurately estimate GVP.
<b>Take by other sectors</b>	<p>Fisheries Queensland estimates the recreational harvest of QMAFF species to be small. Recreational fishers are not allowed to harvest fish using SCUBA or hookah but are limited to free-diving collection. There are also limits on individual recreational take of some species prescribed under the Queensland <i>Fisheries Act 1994</i>. Results of a recent state-wide survey of recreational fishing, to be published in 2012, are anticipated to provide more information about recreational take of QMAFF species.</p> <p>Fisheries Queensland is currently proposing to restrict recreational take in accordance with the limits which currently apply to A2 commercial symbol holders (ten fish comprising not more than two fish of the same species).</p> <p>Indigenous harvest of marine aquarium species is considered to be minimal.</p>
<b>Commercial licences issued</b>	There were a total of 34 licenses (A1 & A2 combined) issued within the QMAFF in 2010.
<b>Management arrangements</b>	<p>The QMAFF is managed under the Queensland <i>Fisheries Act 1994</i> and the Queensland <i>Fisheries Regulations 2008</i>. A variety of input and output controls are used to manage harvest in the QMAFF including:</p> <p><u>Input controls</u></p> <ul style="list-style-type: none"> <li>• entry limited to holders of Commercial Harvest Fishery Licence endorsed with either an A1 or an A2 fishing symbol;</li> <li>• limits on the number of operators under a single licence or symbol;</li> <li>• gear restrictions (type and dimensions - see Gear above);</li> <li>• spatial management which limits effort in five special management areas; and</li> <li>• spatial and seasonal closures.</li> </ul> <p><u>Output controls</u></p> <ul style="list-style-type: none"> <li>• possession limits for A2 symbol holders (ten fish comprising not more than two fish of the same species);</li> <li>• the <i>Fisheries Regulations 2008</i> prohibits the take of humphead Maori wrasse and <i>Tridacna</i> sp. (giant clams);</li> <li>• prohibitions on the take of some species of fin fish; and</li> <li>• minimum and maximum size limits for some species of fin fish.</li> </ul> <p><b>Recreational fishing:</b></p> <ul style="list-style-type: none"> <li>• There are gear restrictions in place for recreational fishers as well as a prohibition on the use of SCUBA and hookah equipment, along with possession and size limits for some species.</li> </ul>

<b>Export</b>	The majority of product is exported live to the American, Asian and European markets.
<b>Bycatch</b>	There is no bycatch in the QMAFF as targeted hand collection methods are used.
<b>Interaction with Protected Species<sup>1</sup></b>	<p>Commercial operators in Queensland fisheries are required to report any interactions with protected species in the species of conservation interest (SOCI) logbook; including species protected under Part 13 of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) and species protected under Queensland environment legislation. No interactions with protected species have been reported by QMAFF operators.</p> <p>In 2009 Fisheries Queensland developed a performance measurement system for the QMAFF including performance measures for interactions with species of conservation interest. In 2010 no measures relating to SOCI were triggered.</p>
<b>Ecosystem Impacts</b>	<p>Ecosystem impacts resulting from the operation of the QMAFF are thought to be low, as collection is targeted and limited to hand or hand held apparatus.</p> <p>As discussed at Fishery Status above, the ecological risk assessment of the QMAFF undertaken by Fisheries Queensland in 2008 concluded that no QMAFF retained species were at high risk from fishing.</p>
<b>Impacts on CITES species</b>	<p>As a party to the Convention, Australia must apply all Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) provisions of the EPBC Act to CITES imports and exports as appropriate.</p> <p>CITES species that are permitted to be harvested in the QMAFF include <i>Hippocampus</i> spp. (seahorses - family <i>Syngnathidae</i>). This assessment considers the possible impacts on species harvested in the QMAFF which are listed under CITES (see Table 3).</p>

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

<p><b>Impacts on World Heritage property/ Great Barrier Reef Marine Park</b></p>	<p>The assessment considered the possible impacts on the World Heritage values of the Great Barrier Reef World Heritage Area and on the Great Barrier Reef Marine Park.</p> <p>Impacts on the environment in the Great Barrier Reef Marine Park and the Great Barrier Reef World Heritage Area are likely to be minimal, as:</p> <ul style="list-style-type: none"> <li>• the QMAFF is a targeted hand collection fishery;</li> <li>• approximately 30 per cent of the area of the Great Barrier Reef Marine Park is designated sanctuary zones, providing protection for reef habitats; and</li> <li>• the ecological risk assessment of the fishery determined that no QMAFF retained species were at high risk from fishing, with most species determined to be at negligible or low risk.</li> <li>• This section needs to make reference to the Stewardship Action Plan and the industry codes of practice contained within this</li> </ul> <p>On this basis the department considers that an action taken by an individual fisher, acting in accordance with the QMAFF management arrangements in force under the Queensland <i>Fisheries Act 1994</i> and the Queensland <i>Fisheries Regulation 2008</i>, would not be expected to have a significant impact on a matter protected by the EPBC Act.</p>
<p><b>Wetlands of International Importance</b></p>	<p>The assessment also considered the possible impacts on the ecological character of the Moreton Bay, Great Sandy Strait, Shoalwater and Corio Bays and Bowling Green Bay Ramsar Sites.</p> <p>As the majority of commercial aquarium fish collecting occurs in coastal and reef waters in northern Queensland, outside of Ramsar sites, and due to the benign harvesting method (hand collection) used in the fishery and the relatively low numbers of each species harvested, the department considers that an action taken by an individual fisher, acting in accordance with the QMAFF management arrangements in force under the Queensland <i>Fisheries Regulation 2008</i> and the Queensland <i>Fisheries Act 1994</i>, would not be expected to have a significant impact on a Wetland of International Importance.</p>

**Table 2: Progress in implementation of recommendations and conditions made in the 2008 assessment of the Queensland Marine Aquarium Fish Fishery**

Condition	Progress	Recommended Action
<p><b>Condition 1:</b> Operation of the fishery will be carried out in accordance with the Marine Aquarium Fish Fishery (MAFF) management arrangements in force under the Queensland <i>Fisheries Act 1994</i> and the Queensland <i>Fisheries Regulation 2008</i>.</p>	<p>Fisheries Queensland has advised that the Queensland Marine Aquarium Fish Fishery (QMAFF) continues to be managed in accordance with the management regime made under the Queensland <i>Fisheries Act 1994</i> and the Queensland <i>Fisheries Regulation 2008</i>.</p>	<p>The Department of Sustainability, Environment, Water, Population and Communities considers that this condition has been met.</p> <p>The department recommends that a new approved wildlife trade operation declaration for the QMAFF specify a similar condition (<b>Condition 1, Table 4</b>).</p>
<p><b>Condition 2:</b> The Department of Primary Industries and Fisheries (DPI&amp;F) to inform the Department of the Environment, Water, Heritage and the Arts (DEWHA) of any intended amendments to the management arrangements that may affect the assessment of the MAFF against the criteria on which <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) decisions are based.</p>	<p>Fisheries Queensland has advised the department that there have been no changes in management arrangements over the course of the approved wildlife trade operation declaration.</p>	<p>The department considers that this condition has been met.</p> <p>The department recommends that a new approved wildlife trade operation declaration for the QMAFF specify a similar condition (<b>Condition 2, Table 4</b>).</p>
<p><b>Condition 3:</b> DPI&amp;F to produce and present reports to DEWHA annually as per Appendix B to the <i>Guidelines for the Ecologically Sustainable Management of Fisheries 2<sup>nd</sup> Edition</i>.</p>	<p>Fisheries Queensland has provided annual status reports for the QMAFF to the department each year. Fisheries Queensland also provides reports on progress against the conditions and recommendations of the 2008 assessment.</p>	<p>The department considers that this condition has been met.</p> <p>The department recommends that a new approved wildlife trade operation declaration for the QMAFF specify a similar condition (<b>Condition 3, Table 4</b>).</p>
<p><b>Condition 4:</b> DPI&amp;F to consult with DEWHA prior to a change to the management arrangements for a species listed under the Convention on International Trade in Endangered Species of Wild Fauna and Flora or EPBC Act listed species being implemented.</p>	<p>Fisheries Queensland has advised that there were no changes to the management arrangements for species listed under CITES or EPBC Act listed species in the QMAFF since the previous declaration as an approved wildlife trade operation.</p>	<p>The department considers that this condition has been met.</p>

Recommendation	Progress	Recommended Action
<p><b>Recommendation 1:</b> By 1 July 2009 the Department of Primary Industries and Fisheries (DPI&amp;F) to finalise and implement the draft Performance Measurement System (PMS) for the Marine Aquarium Fish Fishery (MAFF). DPI&amp;F to continually monitor and update the PMS annually to ensure it remains current and capable of monitoring the performance of the fishery.</p>	<p>A draft performance measurement system for the Queensland Marine Aquarium Fish Fishery (QMAFF) formed part of Fisheries Queensland's submission for the 2008 EPBC Act assessment of the fishery. The finalised performance measurement system for the QMAFF was published in April 2009.</p> <p>Fisheries Queensland monitors the performance of the QMAFF annually against the performance measures and reports this in the annual status reports for the fishery.</p> <p>However, it appears that the performance measurement system itself has not been updated since its commencement. In its 2011 submission, Fisheries Queensland stated that it considers that the performance measurement system is adequate to monitor the performance of the fishery.</p>	<p>The department notes that Fisheries Queensland intends to review the ecological risk assessment for the QMAFF and plans to review the performance measurement system subsequent to this.</p> <p>The department acknowledges that annual updates of the performance measurement system for this fishery may not be required. However, as the performance measurement system is the primary management document for this fishery, the department recommends that Fisheries Queensland put in place ongoing arrangements which ensure that management tools, such as the performance measurement system, are reviewed and updated as necessary for them to remain capable of monitoring the performance of the fishery and highlighting when a management response is needed to maintain the ecological sustainability of the fishery.</p> <p>(see <b>Recommendation 1, Table 4</b>).</p>

Recommendation	Progress	Recommended Action
<p><b>Recommendation 2:</b> DPI&amp;F to:</p> <p>a) Ensure reporting in the logbook, including species and spatial reporting, is sufficient to monitor and update the PMS and inform the management of the fishery. Particular consideration should be given to Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and species listed under Part 13 of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act).</p> <p>b) continue to actively monitor catch and effort data and respond to new information to manage species and areas at risk from localised depletion.</p> <p>c) ensure that management tools, including the Ecological Risk Assessment (ERA), are subject to periodic reviews and adapt to improved understanding of species harvested in the MAFF.</p>	<p>The department's <i>Assessment of the Queensland Marine Aquarium Fish Fishery – November 2008</i> noted that:</p> <ul style="list-style-type: none"> <li>• the large number of species collected in the fishery would require ongoing monitoring of the data collected through fisher logbooks to ensure that reporting remains appropriate for managing the fishery;</li> <li>• the revised logbook for the QMAFF introduced in 2006 predated the ecological risk assessment for the fishery and so did not take into account the results of the risk assessment; and</li> <li>• the information available for reef fish may limit the ability to fully assess the risk of localised depletion for reef based species.</li> </ul> <p>Fisheries Queensland reports that the QMAFF logbook was revised to include species specific columns for anemone fish and syngnathids to record finer resolution data for these species and that a new logbook was implemented on 1 July 2010.</p> <p>Fisheries Queensland considers that the logbooks provide sufficient data to monitor, update and review the performance management system.</p> <p>Fisheries Queensland has advised that it plans to review the ecological risk assessment and performance measurement system for the QMAFF during 2012.</p> <p>Fisheries Queensland reports that all management tools for the QMAFF regularly take into account new information that becomes available and during reviews relevant documents are updated to ensure that the fishery is managed using the most sustainable and effective techniques.</p>	<p>The department considers that this recommendation has been met.</p> <p>The department recommends that the management tools continue to be subject to periodical review. (see <b>Recommendation 1, Table 4</b>)</p>

Recommendation	Progress	Recommended Action
<p><b>Recommendation 3:</b> DPI&amp;F to finalise the research and development plan for hand harvest fisheries and support research as appropriate in the MAFF. Particular consideration should be given to CITES and species listed under Part 13 of the EPBC Act.</p>	<p>In 2008, Fisheries Queensland developed the <i>Harvest Fishery Research and Development Priorities (2008-2013)</i>. That document identified:</p> <ul style="list-style-type: none"> <li>• developing methods for monitoring the Queensland Marine Aquarium Fish Fishery (QMAFF) or signs of local population depletion; and</li> <li>• investigating the life history parameters of species that are of particular importance in the fishery as the highest research priorities in the QMAFF.</li> </ul> <p>The resilience of corals and reef fish species, some of which are taken in the QMAFF, to environmental change (including climate change) was also identified as a research need for Queensland's harvest fisheries.</p> <p>The department recognises the progress made by Fisheries Queensland on finalising research and completion of the climate change vulnerability assessment. However, the department notes that CITES listed species and species listed under Part 13 of the EPBC Act were not identified as research priorities for the QMAFF.</p>	<p>The department notes that:</p> <ul style="list-style-type: none"> <li>• no harvest of species listed under CITES or species listed under Part 13 of the EPBC Act has been reported from the QMAFF since 2006 and that this has influenced the research priorities for the QMAFF; and</li> <li>• should Fisheries Queensland wish to obtain a non-detriment finding for CITES listed <i>Hippocampus</i> spp. to allow export of the specimens of these species harvested from the QMAFF, additional information on species distribution and abundance and population trends for <i>Hippocampus</i> spp. in the area of the QMAFF would be required (see Table 3).</li> </ul>
<p><b>Recommendation 4:</b> DPI&amp;F to investigate and implement appropriately precautionary in-possession limits to manage recreational take in the MAFF.</p>	<p>Fisheries Queensland has advised that it is proposing to implement restrictions on recreational take in accordance with the limits under A2 endorsed commercial licenses (ten fish in total, comprising no more than two fish of any one species) and that these proposed changes are planned for consideration in 2012.</p> <p>The department supports the approach being taken by Fisheries Queensland to manage the recreational take in the fishery.</p>	<p>The department considers that this recommendation is ongoing. (see <b>Recommendation 2, Table 4</b>).</p>

**Table 3: The Department of Sustainability, Environment, Water, Population and Communities assessment of the Queensland Marine Aquarium Fish Fishery against the requirements of the *Environment Protection and Biodiversity Conservation Act 1999* related to decisions made under Part 13A.**

**Please Note** – the table below is not a complete or exact representation of the *Environment Protection and Biodiversity Conservation Act 1999* (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.

**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<sup>2</sup> 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.

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<sup>2</sup> Convention on International Trade in Endangered Species of Wild Fauna and Flora

Section 303FN Approved wildlife trade operation	The department's assessment of the Queensland Marine Aquarium Fish Fishery
<p>(2) The Minister may, by instrument published in the <i>Gazette</i>, declare that a specified wildlife trade operation is an <b>approved wildlife trade operation</b> for the purposes of this section.</p>	
<p>(3) The Minister must not declare an operation as an approved wildlife trade operation unless the Minister is <b>satisfied</b> that:</p> <p>(a) the operation is consistent with the objects of Part 13A of the Act; and</p>	<p>The department is aware that <i>Hippocampus</i> species (seahorses) have been harvested in the Queensland Marine Aquarium Fish Fishery (QMAFF) in the past, but that they have not been taken in the fishery since 2006. The department is not aware of any other species listed under CITES taken in the QMAFF. In view of the limited information on species distribution and abundance and population trends for <i>Hippocampus</i> spp. in the area of the QMAFF, the Australian CITES Scientific Authority - Marine Species has advised that it is not possible to make a CITES non-detriment finding for <i>Hippocampus</i> spp harvested from the QMAFF at this time. The department therefore recommends that, in accordance with subsection 303FT, the operation of the QMAFF should be declared as an approved wildlife trade operation only to the extent that the fishery relates to specimens of species not listed under CITES (i.e. the declaration excludes specimens of species listed under CITES).</p> <p>In regard to the remainder of the operation, the department considers that the operation of the QMAFF would be consistent with the provisions of Part 13A as:</p> <ul style="list-style-type: none"> <li>• there are management arrangements in place to ensure that the resource is being managed in an ecologically sustainable way (see Table 1);</li> <li>• the operation of the QMAFF during the period of the recommended declaration as an approved wildlife trade operation is unlikely to be unsustainable or threaten biodiversity; and</li> <li>• the <i>Environment Protection and Biodiversity Conservation Regulations 2000</i> (EPBC Regulations) do not specify fish as a class of animal in relation to the welfare of live specimens.</li> </ul>

<p>(b) the operation will not be detrimental to:</p> <ul style="list-style-type: none"> <li>i. the survival of a taxon to which the operation relates; or</li> <li>ii. the conservation status of a taxon to which the operation relates; and</li> </ul>	<p>With the exception of the harvest of <i>Hippocampus</i> spp noted above [paragraph 303FN(3)(a)], the department considers that the operation of the QMAFF, during the period of the recommended declaration as an approved wildlife trade operation, will not be detrimental to the survival or conservation status of a taxon to which it relates, given the management measures currently in place, which include:</p> <ul style="list-style-type: none"> <li>• limited entry;</li> <li>• gear restricted to hand collection with the assistance of hand held apparatus;</li> <li>• area closures and special management areas;</li> <li>• a vulnerability assessment, sustainability assessment and ecological risk assessment for QMAFF species; and</li> <li>• a reviewable performance measurement system, based on the ecological risk assessment, with management objectives, performance measures, performance indicators and management responses if the indicators are triggered.</li> </ul>
<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>With the exception of the harvest of <i>Hippocampus</i> spp noted above [paragraph 303FN(3)(a)], the department considers that the operation of the QMAFF during the period of the recommended declaration as an approved wildlife trade operation will not threaten any relevant ecosystem, given the management measures currently in place, which include:</p> <ul style="list-style-type: none"> <li>• limited entry;</li> <li>• gear restricted to hand collection with the assistance of hand held apparatus;</li> <li>• area closures and special management areas;</li> <li>• a vulnerability assessment, sustainability assessment and ecological risk assessment for QMAFF species; and</li> <li>• a reviewable performance measurement system based on the ecological risk assessment.</li> </ul>
<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>The EPBC Regulations do not specify fish as a class of animal 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>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>(b) the effectiveness of the management arrangements for the operation (including monitoring procedures).</p>	<p>With the exception of the harvest of <i>Hippocampus</i> spp noted above [paragraph 303FN(3)(a)], the department considers that the operation of the QMAFF during the period of the recommended declaration as an approved wildlife trade operation will not have a significant impact on any relevant ecosystem, given the management measures currently in place, which include:</p> <ul style="list-style-type: none"> <li>• limited entry;</li> <li>• gear restricted to hand collection with the assistance of hand held apparatus;</li> <li>• area closures and special management areas;</li> <li>• a vulnerability assessment, sustainability assessment and ecological risk assessment for QMAFF species; and</li> <li>• a reviewable performance measurement system based on the ecological risk assessment.</li> </ul> <p>The management arrangements that will be employed for the QMAFF are likely to be effective. Management arrangements for the fishery are included in the Queensland <i>Fisheries Act 1994</i> and the <i>Fisheries Regulation 2008</i>. Management measures include:</p> <ul style="list-style-type: none"> <li>• limited entry;</li> <li>• gear restricted to hand collection with the assistance of hand held apparatus;</li> <li>• area closures and special management areas;</li> <li>• a vulnerability assessment, sustainability assessment and ecological risk assessment for QMAFF species; and</li> <li>• a reviewable performance measurement system.</li> </ul> <p>Fisheries Queensland reviews the performance of the fishery annually against a series of management objectives, performance indicators and trigger reference points.</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>The QMAFF will be managed under the Queensland <i>Fisheries Act 1994</i> and the Queensland <i>Fisheries Regulation 2008</i>.</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 Queensland <i>Fisheries Act 1994</i> and the Queensland <i>Fisheries Regulation 2008</i> apply throughout Queensland waters.</p> <p>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>(d) the operation is a commercial fishery.</p>	<p>The QMAFF is a commercial fishery.</p>

<b>Section 303FR Public consultation</b>	<b>The department's assessment of the Queensland Marine Aquarium Fish Fishery</b>
<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>The department considers that the consultation requirements of the EPBC Act for declaring an approved wildlife trade operation have been met. A public notice, which set out the proposal to declare the Queensland Marine Aquarium Fish Fishery (QMAFF) an approved wildlife trade operation and included the submission from Fisheries Queensland, was released for public comment which closed on 11 October 2011 with one comment 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 QMAFF an approved wildlife trade operation and included the submission from Fisheries Queensland, was released for public comment on 8 September 2011 which closed on 11 October 2011, a total of 21 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>The public comment received on the submission is included at <u>Attachment D</u> of the brief. The department's assessment has considered the public comments received.</p>

Section 303FT Additional provisions relating to declarations	The department's assessment of the Queensland Marine Aquarium Fish Fishery
(1) This section applies to a declaration made under section 303FN, 303FO or 303FP.	The department recommends that the Queensland Marine Aquarium Fish Fishery (QMAFF) be declared an approved wildlife trade operation under section 303FN.
(3) 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 to the extent that the plan or operation relates to a particular class of specimens. In such a case: <p>(a) the instrument of declaration is to specify that class of specimens; and</p> <p>(b) the plan or operation is covered by the declaration only to the extent that the plan or operation relates to that class of specimens.</p>	The department considers that the operation of the QMAFF should be declared as an approved wildlife trade operation only to the extent that the fishery relates to specimens of species not listed under CITES (i.e. the declaration excludes specimens of species listed under CITES). <p>The instrument of declaration for the QMAFF specifies the class of specimens.</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>(c) during a particular period; or</p> <p>(d) while certain circumstances exist; or</p> <p>(e) 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>	The department considers that the QMAFF should be the subject of a declaration under section 303FN only while the conditions described in Table 4 are complied with. <p>The instrument of declaration for the QMAFF specifies the conditions.</p>
(8) A condition may relate to reporting or monitoring.	One of the 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 under section 303FN and the class of specimens and conditions under section 303FT will be gazetted and made available on the department's website.

**Part 16**

<b>Section 391 Minister must consider precautionary principle in making decisions</b>	<b>The department's assessment of the Queensland Marine Aquarium Fish Fishery</b>
(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 considered in preparing the department's advice about a decision to declare the QMAFF an approved wildlife trade operation under section 303FN.
(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.	

## **Final recommendations to Fisheries Queensland for the Marine Aquarium Fish Fishery**

### **Stock status and recovery**

The Department of Sustainability, Environment, Water, Population and Communities considers that the management regime for the Queensland Marine Aquarium Fish Fishery (QMAFF) aims to ensure that fishing is conducted in a manner that does not lead to over-fishing and that the target stocks are not currently overfished.

A risk assessment based approach has been taken to determine management priorities for target species. Fisheries Queensland implemented a performance management system in 2009, based on the outcomes of an ecological risk assessment undertaken in 2008, to provide the framework for management of the fishery. Management measures include limited entry, gear restrictions, special management areas, catch restrictions on some licence types and a suite of performance indicators which trigger management responses.

### **Ecosystem impacts**

Given the targeted nature of harvest and gear used in the fishery and the management measures described above, the department also considers that the potential for the QMAFF to impact unacceptably and unsustainably on any relevant ecosystem is low.

Notwithstanding the progress made by Fisheries Queensland to address the outstanding risks associated with this fishery, the department has identified a number of risks and uncertainties that must be managed to ensure that impacts are minimised. The department considers there is a need for Fisheries Queensland to:

- ensure that management tools such as the ecological risk assessment and performance measurement system are reviewed and updated as necessary for them to remain relevant and capable of:
  - monitoring the performance of the fishery; and
  - identifying when a management response is needed to maintain the ecological sustainability of the fishery; and
- implement appropriately precautionary possession limits to manage recreational take in the fishery,

to ensure that risks are minimised in the longer term.

The department considers that declaration of the harvest operations of the QMAFF, excluding the harvest of specimens of species listed under CITES, as an approved wildlife trade operation for three years, until 21 November 2014, is appropriate (Table 3). The department considers that the declaration should be subject to the conditions listed in Table 4 below.

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

**Table 4: Conditions and recommendations on the declaration of the Queensland Marine Aquarium Fish Fishery as an approved wildlife trade operation - November 2011**

Issue	Recommendation
<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 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><b>Condition 1:</b>  Operation of the Queensland Marine Aquarium Fish Fishery will be carried out in accordance with the management arrangements in force under the Queensland <i>Fisheries Act 1994</i> and the Queensland <i>Fisheries Regulation 2008</i>.</p> <p><b>Condition 2:</b>  Fisheries Queensland to advise the Department of Sustainability, Environment, Water, Population and Communities of any intended amendments to the management arrangements for the Queensland Marine Aquarium Fish Fishery that could affect the criteria on which <i>Environment Protection and Biodiversity Conservation Act 1999</i> decisions are based.</p>
<p><u>Annual reporting</u>  It is important that reports be produced and presented to the Department of Sustainability, Environment, Water, Population and Communities annually in order for the performance of the fishery and progress in implementing the conditions and recommendations in this report and other managerial commitments to be monitored and assessed throughout the life of the declaration.</p> <p>Annual reports should 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 information outlining progress in implementing conditions and recommendations resulting from the previous accreditation of the fishery (for a complete description of annual reporting requirements, see Appendix B of the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i> available from the department's website at <a href="http://www.environment.gov.au/coasts/fisheries/publications/guidelines.html">http://www.environment.gov.au/coasts/fisheries/publications/guidelines.html</a>).</p>	<p><b>Condition 3:</b>  Fisheries Queensland to produce and present reports to the Department of Sustainability, Environment, Water, Population and Communities annually as per Appendix B of the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i>.</p>

### Sustainability of harvest of QMAFF species

It is important that the management regime in the Queensland Marine Aquarium Fish Fishery (QMAFF) is able to adapt to improved understanding of species harvested in the fishery and changed fishing patterns and environmental factors to ensure that risks to stocks are minimised.

The Department of Sustainability, Environment, Water, Population and Communities acknowledges Fisheries Queensland's commitment to continually improve the ecological risk assessment for the QMAFF to maximise its ability to inform management.

A public comment on Fisheries Queensland's 2011 submission argued that stock assessments and/or stock status assessments<sup>[1]</sup> should be completed for QMAFF species. In the *Annual status report 2011 - Marine Aquarium Fish Fishery*, Fisheries Queensland noted that key species in the QMAFF met only one of the general principles of Fisheries Queensland's *Framework for Defining Stock Status* (the framework lists general principles that guide inclusion in the annual stock status assessment process). Fisheries Queensland was therefore of the opinion that there was insufficient justification for the inclusion of key species in Fisheries Queensland's stock status assessment program.

The department agrees that stock assessments would provide a superior basis for management of the harvest of individual species. Nonetheless, given:

- a relatively low level of take of a large number of species;
  - Fisheries Queensland's performance management framework; and
  - Fisheries Queensland's commitment to an ecological risk assessment process for this fishery,
- the department considers Fisheries Queensland's approach to managing non CITES listed QMAFF species to be appropriate at this time.

The *Performance Measurement System - Queensland Marine Aquarium Fish Fishery- Version 1 - April 2009* contains the objectives, performance indicators, performance measures and management responses for the QMAFF. As the performance measurement system is the primary management document for this fishery, the department recommends that Fisheries Queensland put in place ongoing arrangements which ensure that the performance measurement system is reviewed and updated as necessary for it to remain capable of monitoring the performance of the fishery and identifying when a management response is needed to maintain the ecological sustainability of the fishery.

### **Recommendation 1:**

Fisheries Queensland to put in place arrangements which ensure that management tools for the Marine Aquarium Fish Fishery, including the ecological risk assessment and performance measurement system, are subject to periodic reviews to ensure that they:

- take into account new information as it becomes available; and
- remain relevant and capable of identifying when a management response is needed to maintain the ecological sustainability of the fishery.

Fisheries Queensland to continue to monitor the status of the fishery in relation to the performance measures and report annually against those measures, including any management actions implemented in response to performance triggers and the rationale for any nil management response.

<sup>[1]</sup> Framework for Defining Stock Status. Version 2 April 2011. [[http://www.dpi.qld.gov.au/documents/Fisheries\\_SustainableFishing/Framework-for-Defining-Stock-Status-V2.pdf](http://www.dpi.qld.gov.au/documents/Fisheries_SustainableFishing/Framework-for-Defining-Stock-Status-V2.pdf)]

Managing recreational take of QMAFF species

Recreational harvest of QMAFF species is managed through possession limits, gear restrictions and prohibitions on the take of some species. At the time of the 2005 assessment of the QMAFF, a recommendation was made for Fisheries Queensland<sup>3</sup> to develop and implement a process to improve estimates of recreational take and factor these into stock assessments and management controls.

In the 2008 assessment of the fishery, a recommendation was made for Fisheries Queensland to investigate and implement appropriately precautionary in-possession limits to manage recreational take in the fishery. In response to that recommendation, Fisheries Queensland has stated that it is proposing to introduce restrictions on recreational take in the fishery in accordance with the limits provided under A2 endorsed commercial licences in the QMAFF. Fishers endorsed with an A2 symbol have a possession limit of ten fish comprising not more than two fish of the same species.

The department supports the approach being taken by Fisheries Queensland to manage the recreational take of QMAFF species.

The department expects that estimates of potential harvest of QMAFF species by recreational fishers will be taken into account in future risk assessment and management planning for the QMAFF.

**Recommendation 2:**

Fisheries Queensland to implement appropriately precautionary possession limits to manage recreational take in the Marine Aquarium Fish Fishery.

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<sup>3</sup> then, the Department of Primary Industries and Fisheries

## Acronyms

CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DEWHA	Department of the Environment, Water, Heritage and the Arts
DPI&F	Queensland Department of Primary Industries and Fisheries
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPBC Regulations	<i>Environment Protection and Biodiversity Regulations 2000</i>
ERA	Ecological risk assessment
GVP	Gross value of production
MAFF	Marine Aquarium Fish Fishery
QMAFF	Queensland Marine Aquarium Fish Fishery
PMS	Performance Measurement System
SEWPaC	(Department of) Sustainability, Environment, Water, Population and Communities
SCUBA	Self-contained underwater breathing apparatus