



Queensland Marine Aquarium Fish Fishery Data Improvement Plan

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Background

On 23 April 2021, the Commonwealth Minister for the Environment made a Wildlife Trade Operation (WTO) declaration, commonly referred to as a WTO export approval, under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for the Queensland marine aquarium fish fishery (MAFF).

Condition 6 of the WTO states that the Queensland Department of Agriculture and Fisheries must:

- a) From 1 July 2022, ensure the catch of all listed EPBC species in the MAFF, for example, Scalloped Hammerhead Sharks and Syngnathids, are reported to species level.
- b) **By December 2022**, provide the Department of Agriculture, Water and the Environment (DAWE) with a **Data Collection Improvement Plan** for the fishery. The Plan must review current data collection requirements in the fishery and identify where possible, improvements to ensure catch is reported to species level.
- c) If species are not reported to species-level, establish a plan to ensure that catches of these species are regularly monitored and managed in a precautionary way.
- d) By September 2023, begin implementing its Data Collection Improvement Plan for the MAFF.

The Data Improvement Plan has been discussed with the Coral and MAFF working group.



Information on the WTO assessment and approval is available at <https://www.awe.gov.au/environment/marine/fisheries/qld/aquarium>

Information on the Queensland working group is available at www.daf.qld.gov.au/business-priorities/fisheries/sustainable/fishery-working-groups/marine-aquarium-fish-and-coral-fisheries-working-group/communiques

About the fishery

The MAFF (fishery symbol “A1” or “A2”) fishery area consists of the area of the following waters—

- (a) tidal waters within the Moreton Bay Marine Park;
- (b) tidal waters north of Cape Moreton and south of latitude 26°18' south, other than waters within the Moreton Bay Marine Park;
- (c) tidal waters west of longitude 151°08' east and between latitude 23°15' south and latitude 23° south;
- (d) tidal waters within the area described as area 1 in the Whitsundays Plan of Management, schedule 1;
- (e) tidal waters within the following boundary—
 - from the intersection of latitude 17°08' south with the mainland shore to latitude 17°08' south, longitude 146°12' east
 - to latitude 16°51' south, longitude 146°28' east
 - to latitude 15°55' south, longitude 145°51' east
 - along latitude 15°55' south to the mainland shore
 - along the mainland shore to latitude 17°08' south;
- (f) tidal waters south of latitude 10°41' south and east of longitude 142°31'49" east, other than the waters mentioned in paragraphs (a) to (e).

The fishery comprises five special management areas that can only be accessed by holders of an A1 symbol. The remainder of the fishery area is open to A1 and A2 authority holders.

Fish collected within the fishery are only to be sold if being used for display as an aquarium fish or used as broodstock.

The Fisheries (Commercial Fisheries) Regulation 2019 specifies fish that may NOT be taken:

- (a) barramundi;
- (b) sea cucumber, other than the following:
 - *Bohadschia graeffei*
 - *Calachrius crassus*
 - *Cucmaria miniata*
 - *Euapta godeffroyi*
 - *Holothuria edulis*
 - *Holothuria hilla*
 - *Opheodesoma spp.*
 - *Pentacta anceps*
 - *Pentacta lutea*
 - *Pseudocolchirus violaceus*
 - *Stichopus noctivagus*
 - *Synapta maculata*.
- (c) shell grit;
- (d) star sand;
- (e) any species of coral, oyster, pearl oyster or trochus.

The Fisheries Declaration 2019, schedule 2, defines certain species as regulated. For some species, the regulation extends to any person taking or possessing the fish, whether recreationally or commercially.

'No take' species cannot be taken under an A1 or A2 licence. Occasionally a general fisheries permit (GFP) is issued to allow the take and possession of 'no take' species.

Fish that are restricted from any taking or possession include:

- barramundi cod
- chinaman fish
- giant clam
- helmet shell
- humphead Maori wrasse
- manta ray
- paddletail
- potato rock cod
- Queensland groper
- red bass
- sandtiger shark
- sawfish
- speartooth shark
- spiny crayfish
- trumpet shell
- white shark

Under the harvest strategy, the MAFF is managed at a species level and risks to stocks identified through ecological risk assessments.

Management under the Marine Aquarium Fish Fishery Harvest Strategy

The following species have been identified by the harvest strategy as Tier 1 species, on the basis of being “moderate or high level of ecological risk, or no-take recreational species”.

Group	Tier 1 species	Notes
Anemone fish, angelfish, clownfish, tangs	• wideband anemonefish (<i>Amphiprion latezonatus</i>)	
	• blackback anemonefish (<i>Amphiprion melanopus</i>)	
	• ocellaris clownfish (<i>Amphiprion ocellaris</i>)	
	• orange clownfish (<i>Amphiprion percula</i>)	
	• scribbled angelfish (<i>Chaetodontoplus duboulayi</i>)	
	• Queensland yellowtail angelfish (<i>Chaetodontoplus meredithi</i>)	
	• blue tang (<i>Paracanthurus hepatus</i>)	
Tuskfish	• harlequin tuskfish (<i>Choerodon fasciatus</i>)	
Pineapple fish	• pineapplefish (<i>Cleidopus gloriamaris</i>)	
Sharks and rays	• scalloped hammerhead shark (<i>Sphyrna lewini</i>)	no recreational take
	• longfin mako shark (<i>Isurus paucus</i>)	
	• great hammerhead shark (<i>Sphyrna mokaran</i>)	no recreational take
	• smooth hammerhead shark (<i>Sphyrna zygaena</i>)	no recreational take
	• shortfin mako shark (<i>Isurus oxyrinchus</i>)	
	• wedgefish (family Rhinidae)	
	• sawfish (family Pristidae)	no take
Cods, wrasses, tuskfish, groper	• giant guitarfish (family Glaucostegidae)	
	• barramundi cod (<i>Chromileptes altivelis</i>)	no take
	• humphead Maori wrasse (<i>Cheilinus undulatus undulates</i>)	no take
	• paddletail (<i>Lutjanus gibbus</i>)	no take
	• Queensland groper (<i>Epinephelus lanceolatus</i>)	no take
	• potato rockcod (<i>Epinephelus tukula</i>)	no take

All other species caught within the fishery have been identified as Tier 2 species (acceptable level of ecological risk) in the harvest strategy.

No catch limits are in place for this fishery; however, all species will be monitored and harvest strategy decision rules applied depending on changes in catch rates.

There is no information available on the traditional or recreational harvest of marine aquarium species. Hobby aquarists do catch some marine aquarium species; however, the number of fish taken is believed to be small.

Economic and social value

In 2019/20, the coral harvest and marine aquarium fisheries (which are combined for the purposes of reporting) produced \$21.8m in gross value of production (at beach price) from a catch of 9t of species counted by weight and 670,000 of species (pieces or fish) counted by number. The fisheries generated \$5.0m in net economic return. Including flow-on effects on the broader economy, the fisheries supported \$24.5m of gross state product and 179 full-time equivalent jobs in Queensland.



More economic and social data for Queensland's fisheries is available at www.daf.qld.gov.au/business-priorities/fisheries/monitoring-research/data/economic-and-social-data

Current management arrangements

The sustainability risk to marine aquarium fish stocks within the MAFF is considered low. In addition to the substantial protection provided by marine park zoning, the collection methods used in the MAFF produce minimal bycatch and have negligible impacts to the broader ecosystem.

The MAFF is primarily managed through effort-based input controls for commercial fishing. The decision rules are risk-based and designed to ensure harvesting remains sustainable by monitoring harvesting trends. Other management tools (eg. size limits, spawning closures etc.) may also be used to support the sustainable management of stocks under this harvest strategy.

The MAFF is not a quota managed fishery, instead using input controls to manage and limit effort placed on the resource. Refer to fisheries legislation for specific gear requirements and rules.

Commercial fishery controls include:

- Limited access
 - 41 licences currently endorsed with A1 symbols.
 - 2 licences currently endorsed with A2 symbols.
- Vessel and tender restrictions
 - All commercial fisheries now operate under a single primary commercial fishing licence. A unique boat mark must be registered on the licence if a boat is being used.
- Number of divers 'to take' restrictions
 - A1 and D (coral) symbols can be fished together on the same fishing trip provided that both symbols are on the same primary commercial fishing licence.
 - However, only three divers can take fish at any one time.
- Gear controls for the take of aquarium fish
 - Commercial – fish may be taken by hand using underwater breathing apparatus. A herding device, fishing lines (using a single barbless hook only), cast net, scoop net or small mesh net may also be used.
 - Recreational – hand collection only (excluding hookah/scuba).
- Requirement for an approved vessel tracking unit to be installed.
- Reporting requirements – fishers must:
 - report trip notices applicable to the MAFF via approved means (e.g. Automated Integrated Voice Response (AIVR) system).
 - complete catch and effort logbooks and the threatened, endangered and protected animal logbook.
 - keep sale dockets for all wholesale sales for 5 years, including to businesses involved in the processing and storage of fisheries resources.

Objective of the Data Improvement Plan

Condition 6 of the WTO states that the Data Collection Improvement Plan for the fishery must:

- review current data collection requirements in the fishery,
- identify where possible, improvements to ensure catch is reported to species level,
- if species are not reported to species-level, a plan must be established to ensure that catches of these species are regularly monitored and managed in a precautionary way.

1. Elements of the Data Improvement Plan

1.1. Revision of logbook species list

The WTO condition requires that catch be reported to species level where possible. There are more than 1500 marine fish species that could be harvested from Queensland waters for private or public aquarium displays. However, many of these species are collected in small or negligible quantities.

Work has commenced on a scoping study for a MAFF Ecological Risk Assessment (ERA). This initial scoping study has identified 274 species that will be considered for inclusion in an updated MAFF ERA. This list includes 27 species that have been identified as risk assessment priorities. Beyond this, approximately 500 additional species and/or genera have been identified as fish that are taken in the MAFF, albeit in very small quantities.

In consideration of the above, a potential list of species has been drafted to be considered in an updated MAFF logbook. It includes: (i) priority marine aquarium fish to consider reporting to species level, and (ii) marine aquarium fish to consider reporting to family level. This list will be refined with input from public consultation.

Considerations include:

- The Convention on International Trade in Endangered Species (CITES) requires reporting to either species or genera level.
- The harvest strategy requires monitoring of species identified as Tier 1.
- Species identified as assessment priorities as part of the ERA development process.

It is recommended that when the revised logbook list is finalised, the logbooks will be reordered taxonomically and possibly codified for ease of use. Additional caveats may need to be added to explain that not all species within a family may be reported to family level, for example where take of a particular species is prohibited.

1.2. Consequential reporting requirements

Existing requirements for reporting will remain in place, although the logbook template may be upgraded. Reporting requirements are detailed here - <https://www.daf.qld.gov.au/business-priorities/fisheries/commercial/commercial-fishing-rules>

The intention is to eventually incorporate this fishery into the electronic reporting system via the Fisheries Qld commercial fishing app (eFisher) as part of the overall program of converting paper logs to electronic logbooks.

Currently, the MAFF is required to provide the following:

- Pre-trip notice (and if relevant, amending notice pre-trip, or emergency notice) via AIVR,
- Daily catch and effort logbook,
- The threatened, endangered and protected animal logbook,
- Sale dockets which must be kept for all wholesale sales for 5 years, including to businesses involved in the processing and storage of fisheries resources.

This is consistent with other non-quota fisheries. A transshipment notice is not applicable since transshipment is not permitted in this fishery.

2. Process for plan development

The milestones and timeframes for implementing the Data Improvement Plan are outlined in Appendix 1.

2.1. Consideration of plan by the working group

The Marine Aquarium Fish and Coral Fisheries Working Group (the working group) will discuss the draft plan ahead of finalisation of the plan by December 2022.

2.2. Public consultation on the draft logbook list

Fisheries Queensland will seek feedback from commercial fishers in the Queensland MAFF and other stakeholders to inform major elements of the plan, in particular the revised logbook list.

Feedback from consultation on the draft logbook list will also assist the ERA scoping study by indicating species of particular importance to the fishery.

2.3. Systems upgrade

Fisheries Queensland may need to undertake fisheries systems upgrades to support any new logbook list.

To comply with the WTO condition, the revised logbooks will need to be in place before 1 July 2023 so as to be in place for the 2023-24 fishing season.

2.4. Communication of changes ahead of 2023-24 season

The revised logbook will need to be made available prior to 1 July 2023 to allow fishers time to familiarise themselves with the expanded list of species.

2.5. ERA and secondary logbook review

Condition 5 of the WTO states:

- By September 2023 the Queensland Department of Agriculture and Fisheries must undertake and publish an ecological risk assessment using appropriate methodology for the fishery. This assessment should encompass all ecosystem components and where risks are identified, recommend measures to address these risks.

The outcomes of the ERA may prompt an additional review of the logbook list depending on the risk priorities that are identified. In this case, the process described above will be revisited.

The harvest strategy may also require review depending on the outcome of the ERA.

Appendix 1 – Timeline and milestones for Data Improvement Plan

Actions	2022						2023						2024				2025				2026											
	Q1			Q2			Q3			Q4			Q1		Q2		Q3		Q4		Q1		Q2		Q3		Q4					
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Collation of data and development of drafts, Review of MAFF species compositions, taxonomy and species distributions	■																															
Discussion of draft Plan and revised logbook with WG				■																												
Finalisation of Plan – submission to DCCEEW																	■															
Public consultation on the revised logbook							■																									
Consequential systems upgrades				■																												
Communication of logbook changes										■																						
Implement changes ahead of 1 July 2023																	■															
Finalisation of ERA	■																		■													
Commence secondary logbook review																							■									
Implement changes ahead of 1 July 2025																									■							