



Impacts of the Fish Maw Trade:

THE URGENT NEED FOR COLLABORATION BETWEEN CMS, CITES AND THE IWC

Fish maw fisheries, driven by rising global demand for swim bladders (maw), are an increasing source of bycatch of threatened cetaceans (whales, dolphins and porpoises), sharks, rays, sirenians (dugongs and manatees) and marine turtles, many of which are CMS-listed. These fisheries also threaten targeted fish species. Few maw fisheries are managed for either target species or bycatch.

The adoption of Decision text on the impacts of the maw trade in **Doc 25.1.1 Bycatch and other Fisheries-induced Mortality** at CMS COP15 would prioritize unsustainable maw fisheries as an emerging issue of concern and endorse collaboration between CMS, the IWC, CITES and other relevant organizations, to develop effective and appropriate mitigation measures for reducing or eliminating bycatch in maw fisheries. This would support the achievement of Targets 3.1, 3.4, 4.1, and 5.3 of the Samarkand Strategic Plan for Migratory Species 2024–2032.

We urge CMS Parties to adopt Draft Decisions 15.BB.g, 15.CC.b and 15.CC.e of UNEP/CMS/COP15/ Doc.25.1.1 (Annex 3) on Bycatch and Other Fisheries-Induced Mortality at CMS COP15, and commit to working collaboratively to prevent further harm to target and non-target species from the maw trade.



INTRODUCTION

Teleost fish are increasingly targeted to meet rising international demand for their swim bladder (maw). This growing, high-value trade, mainly for luxury food in Asian markets, is having a particularly detrimental impact on species of Sciaenidae fish, including croakers, many of which have an unknown, or poorly known, population status. Mortality due to bycatch in maw fisheries also imperils cetaceans (whales, dolphins and porpoises), sharks, rays, sirenians (manatees and dugongs) and marine turtles, including species recognized by the International Union for Conservation of Nature (IUCN) as Critically Endangered (CR), Endangered (EN) or Vulnerable (VU), species listed on Appendix I or II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and species of conservation concern to the International Whaling Commission (IWC) and several IUCN Species Survival Commission (SSC) Specialist Groups.

Global collaboration, in particular by CMS, CITES and the IWC, to address the devastating impacts of the maw trade is urgently needed to combat biodiversity loss, help ensure sustainable fishing livelihoods, meet Sustainable Development Goal 14 to conserve and sustainably use the oceans, seas, and marine resources, and deliver on Targets 4, 5, 9 and 10 of the Kunming-Montreal Global Biodiversity Framework of the Convention on Biological Diversity. Specifically, CITES regulates international trade in endangered marine species and their products, including shark fins, which are also part of the luxury food market, while CMS, the IWC and the Food and Agriculture Organization of the United Nations (FAO) have a long history of providing technical recommendations on the most effective measures for reducing or eliminating bycatch.

BACKGROUND

Maws from teleost fishes in the Sciaenidae family (croakers and drums), as well as several other species, have become high-value commodities in global trade, primarily driven by consumer demand in Asian markets.¹ Like shark fin, fish maw is prized as a luxury food and investment, and for its purported health benefits. Maws from croakers are among the most highly valued due to their larger size and high collagen content.²

International trade in maw is expanding rapidly, with at least 110 countries/territories exporting fish maw to Hong Kong SAR, the main trade hub, at a value of around US\$280 million annually for dried maw alone.³ The value and volume of maw is now comparable to shark fins and sea cucumbers. Indeed, maw is increasingly used as a high-status replacement for shark fin. The escalating value of fish maw to tens of thousands of US dollars per kilogram is driving a highly competitive “gold rush” among fishers in source countries, often accompanied by illegal, unregulated, and unreported (IUU) fishing.⁴ Non-local buyers and traders of maw are increasingly organized, including providing fishers with gillnets, boats, engines and coolers.⁵ Organized crime has identified this opportunity to generate revenue and is increasingly playing a direct role in supply chains. Illegal totoaba (*Totoaba macdonaldi*) fishing and trade in Mexico, for example, is linked to cartel activity.⁶

IMPACTS OF THE MAW TRADE

As its value increases, and demand grows, maw—once a mere byproduct of certain fisheries and traded in small volumes—has become such a valued target of fisheries that meat may be discarded and only the maw retained.⁷ This trend harms populations of target and non-target species, diminishing their ability to fulfil their ecosystem roles, and reducing long-term food and economic security for fishers and their communities.



Target species

Most fishes of the family Sciaenidae are characterized by slow growth, longevity and predictable spawning aggregations.⁸ These factors contribute to unsustainable removals of large, mature fish—those in highest demand due to the size of their maws—during their spawning season, when large numbers of adults migrate and concentrate briefly in confined areas and at specific times in and around estuaries and adjacent shallow coastal habitats.⁹

Over-exploitation is the major threat to more than 150 of the 286 Sciaenidae species.¹⁰ A 2020 review identified 29 croaker species exploited for the maw trade, of which seven were designated on the IUCN Red List of Threatened Species as CR, EN, VU or Near Threatened (NT) and eight were Data Deficient (DD). As the value of, and demand for, fish maw increases and the populations of currently targeted species decline, maw fisheries are expected to intensify and expand to more species. Currently, no migratory Sciaenids are listed on the CMS Appendices, but species targeted for their maw that may qualify include the VU acoupa weakfish (*Cynoscion acoupa*) in the Western Atlantic Ocean¹¹ and the NT blackspotted croaker (*Protonibea diacanthus*) in the Indo-Pacific region.¹² Currently, only the totoaba is listed on CITES (Appendix I).

Bycatch in maw fisheries

The gillnets predominantly used in croaker maw fisheries pose a significant threat to marine megafauna susceptible to bycatch. Increasing demand for croaker maws is intensifying coastal fisheries and catches and bycatches of globally endangered marine megafauna across the world. Impacted species include CMS and CITES Appendix I- and II-listed dolphins, porpoises, sharks, rays, dugongs and marine turtles (see Table 1). More than 40 percent of the marine mammal, shark, ray and marine turtle species occurring in the same waters as high-value croakers are threatened with extinction (CR, EN or VU), while another 13.1 percent are considered NT.¹³ An unknown number of the 54 overlapping species currently considered DD may also be threatened. See table 1 for CITES and CMS status.



Bycatch hotspots in the maw trade

Mexico: In the Gulf of California, the CR vaquita (*Phocoena sinus*) is on the verge of extinction, with fewer than 10 individuals likely remaining, due in large part to ongoing illegal fishing for VU totoaba and illegal trade in totoaba maws.¹⁴ This serves as a stark warning of the costs of failing to address the bycatch risk posed by the intensifying maw trade and illustrates the urgent need for coordinated international engagement.

Papua New Guinea: VU Australian snubfin dolphins (*Orcaella heinsohni*), Australian humpback dolphins (*Sousa sahulensis*), and dugongs (*Dugong dugon*) are threatened with extinction due to croaker maw fisheries.^{15,16} Further, all four CR Indo-Pacific sawfish species (dwarf sawfish (*Pristis clavata*); narrow sawfish (*Anoxypristis cuspidata*); green sawfish (*Pristis zijsron*); and largetooth sawfish (*Pristis pristis*) (all on CITES Appendix I) are now seldom observed in landings as their populations have declined due to bycatch.^{17,18,19} Other species caught in maw fisheries include CR giant guitarfish (*Glaucostegus typus*), bottlenose wedgefish (*Rhynchobatus australiae*), and hammerhead sharks (*Sphyrnidae*; mostly winghead shark (*Eusphyra blochii*), but also great hammerhead (*Sphyrna mokarran*) and scalloped hammerhead (*Sphyrna lewini*)), EN pig-nosed turtles (*Carettochelys insculpta*), VU leatherback sea turtles (*Dermochelys coriacea*), and various species of requiem sharks (*Carcharhinidae*).

Bangladesh: Species bycaught in gillnets set for croakers in Bangladesh, where maws sell for as much as US\$5,000 per kilogram, include CR scalloped hammerhead sharks (*Sphyrna lewini*), EN Irrawaddy dolphins (*Orcaella brevirostris*), and VU Indo-Pacific humpback dolphins (*Sousa chinensis*), finless porpoises (*Neophocaena phocaenoides*), olive ridley turtles (*Lepidochelys olivacea*), and longtail butterfly rays (*Gymnura poecilura*).²⁰ The fish maw business is often connected with the trade in shark fins, with buyers purchasing the products in person.

Guiana Shield: Acoupa weakfish in Guyana, Suriname, French Guiana and Brazil are subject to increasing pressure from artisanal and industrial (including IUU) fisheries. Their maws represent a high proportion of those imported into Hong Kong SAR. Larger maws are worth as much as US\$700 per kilogram to fishers.²¹ Bycaught species include NT Guiana dolphins (*Sotalia guianensis*), EN Northwest Atlantic leatherback turtles,²² LC green turtles (*Chelonia mydas*) and CR daggernose sharks (*Carcharhinus oxyrhynchus*), hammerhead sharks (*Sphyrnidae*), largetooth sawfish and smalltooth sawfish (*Pristis pectinata*).



Global concern and action

Several international and intergovernmental organizations have encouraged coordinated global action to monitor and control the maw trade and mitigate its negative impacts:

- In 2021, the **IUCN World Conservation Congress** (Marseille) adopted IUCN Resolution 132 entitled “Controlling and monitoring trade in croaker swim bladders to protect target croakers and reduce incidental catches of threatened marine megafauna.”²³ *Inter alia*, it urges IUCN members to document catches of croakers by volume, species and value, as well as incidental catches of other species, and encourages range states for threatened marine megafauna impacted by the fish maw trade to ban maw exports until conservation and recovery plans are developed and implemented.
- In 2024, the **IWC** expressed “serious concern over the growing international demand for swim bladders from croaker (Sciaenidae) species which results in the bycatch of small cetaceans, some of which already face a high risk of extinction.” It encouraged CITES “to consider listing croaker species that are caught for their swim bladders in CITES Appendix I or II to ensure that this international trade is regulated.”²⁴
- In October 2025, the **European Parliament** adopted a Resolution setting out the EU’s strategic objectives for the 20th meeting of the Conference of the Parties to CITES (COP20).²⁵ The resolution “calls for actions to ensure that international trade [in maw] does not jeopardize species survival or exacerbate risks to protected species caught incidentally” and “calls on the Parties to propose species of concern for inclusion in the Appendices where CITES criteria are met, and to ensure legal, traceable and biologically sustainable trade.”

Table 1: CITES- and CMS-listed species documented as bycaught in maw fisheries, with IUCN status

Taxon	Species	IUCN RED LIST	CMS		CITES	
		Status	App. I	App. II	App. I	App. II
Marine mammals	<i>Dugong dugon</i>	VU		x	x	
	<i>Phocoena sinus</i>	CR			x	
	<i>Orcaella heinsohni</i>	VU		x	x	
	<i>Orcaella brevirostris</i>	EN	x	x	x	
	<i>Sotalia fluviatilis</i>	EN		x	x	
	<i>Sotalia guianensis</i>	NT		x	x	
	<i>Neophocaena phocaenoides</i>	VU			x	
	<i>Sousa sahalensis</i>	VU		x	x	
Marine Turtles	<i>Lepidochelys olivacea</i>	VU	x	x	x	
	<i>Dermochelys coriacea</i>	VU	x	x	x	
	<i>Carettochelys insculpta</i>	EN				x
Sharks	<i>Sphyrna lewini</i>	CR		x		x
	<i>Sphyrna mokarran</i>	CR		x		
	<i>Eusphrya Blochii</i>	CR				x
	<i>Glyphis glyphis</i>	VU				x
	<i>Glyphis garricki</i>	VU				x
	<i>Glyphis gangeticus</i>	CR				x
Rays	<i>Pristis clavata</i>	CR	x	x	x	
	<i>Pristis zijsron</i>	CR	x	x	x	
	<i>Pristis pristis</i>	CR	x	x	x	
	<i>Anoxypristis cuspidate</i>	CR	x	x	x	
	<i>Rhynchobatus australiae</i>	CR		x		

OPPORTUNITIES FOR PROGRESS AT CMS COP15

Draft Decisions 15.BB.g, 15.CC.b and 15.CC.e of UNEP/CMS/COP15/Doc.25.1.1(Annex 3) on *Bycatch and Other Fisheries-Induced Mortality* at CMS COP15 present a critical new opportunity to advance a coordinated international response to the damaging impacts of the global maw trade, in particular by establishing formal coordination on bycatch reduction with the IWC.

In addition to adopting these Decisions, we urge CMS Parties

- that exploit fish for their maw to undertake assessments of the risk and impact of bycatch in these fisheries, implement effective monitoring and management to prevent bycatch (including encouraging the use of lower-impact fishing gear), collect data on maw exports, and consider restrictions on domestic sales and exports of maw;
- to identify target or bycaught species that qualify for listing on the CMS and CITES Appendices;
- that are Contracting Governments to the IWC to support a Resolution on the impacts of the maw trade at IWC70 in September 2026; and
- that are Parties to the World Customs Organization (WCO) to propose a new specific Harmonized System code for maw to facilitate data collection on the volume and value of the trade, and identify trade routes and source, transit and consumer countries.





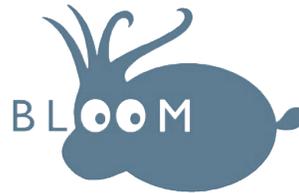
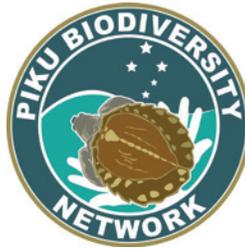
NGO coalition efforts

A coalition of NGOs is examining the biological status of Sciaenidae species whose maws are in international trade, reviewing available trade data, and assessing the impacts of bycatch mortality in maw fisheries. We look forward to providing guidance to interested Parties and other stakeholders at CMS COP15 about how to monitor and regulate international trade in fish maw, mitigate the impacts on target and non-target species, and ensure appropriate listings on the CMS and CITES Appendices.

We invite you to attend our COP15 side event on the impacts of the maw trade at 18:15 on Friday, March, 27, in Room 2.

Endnotes

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