



Protections for Threatened Migratory Sharks

Convention on the Conservation of Migratory Species' 12th meeting of the Conference of the Parties

Overview

Protecting migratory marine species and their habitats is a critical component of efforts to ensure the health of the world's oceans. One of the biggest challenges facing the seas is the depletion of its top predators. Each year, 63 million to 273 million sharks¹ are killed, far more than these species can endure. The demand for their fins, meat, liver oil, and other products coupled with this unsustainable fishing rate has driven declines in shark populations worldwide. The International Union for Conservation of Nature estimates that more than half of shark and ray species are Threatened or Near Threatened with extinction. Whether this catch is unintended, unwanted, or highly sought after, the effect on ocean ecosystems requires urgent action.

With its focus on conserving migratory wildlife, the Convention on the Conservation of Migratory Species of Wild Animals (CMS) plays a key role in this effort. CMS has helped to protect the world’s sharks through the listing of 29 species and the establishment of a dedicated memorandum of understanding. For the 12th meeting of the Conference of the Parties to CMS (COP12) in Manila, the Philippines, governments have proposed a range of Appendix I and II listings. An Appendix I listing mandates full protection of those species most at risk, and an Appendix II listing ensures that the species is recognized as a global conservation priority.

Table 1
Species Proposed for Listing and Sponsoring States

Species	Proposed listing	Proponent(s)
Whale shark	Appendix I	The Philippines, Israel, Sri Lanka
Angel shark	Appendix I & II	Monaco
White-spotted wedgefish	Appendix II	The Philippines
Common guitarfish	Appendix II	Senegal, Mauritania, Israel,* Togo
Dusky shark	Appendix II	Honduras
Blue shark	Appendix II	Sri Lanka, Samoa

* Israel’s proposal includes listing the Mediterranean Sea population on Appendix I.

Source: Convention on the Conservation of Migratory Species of Wild Animals

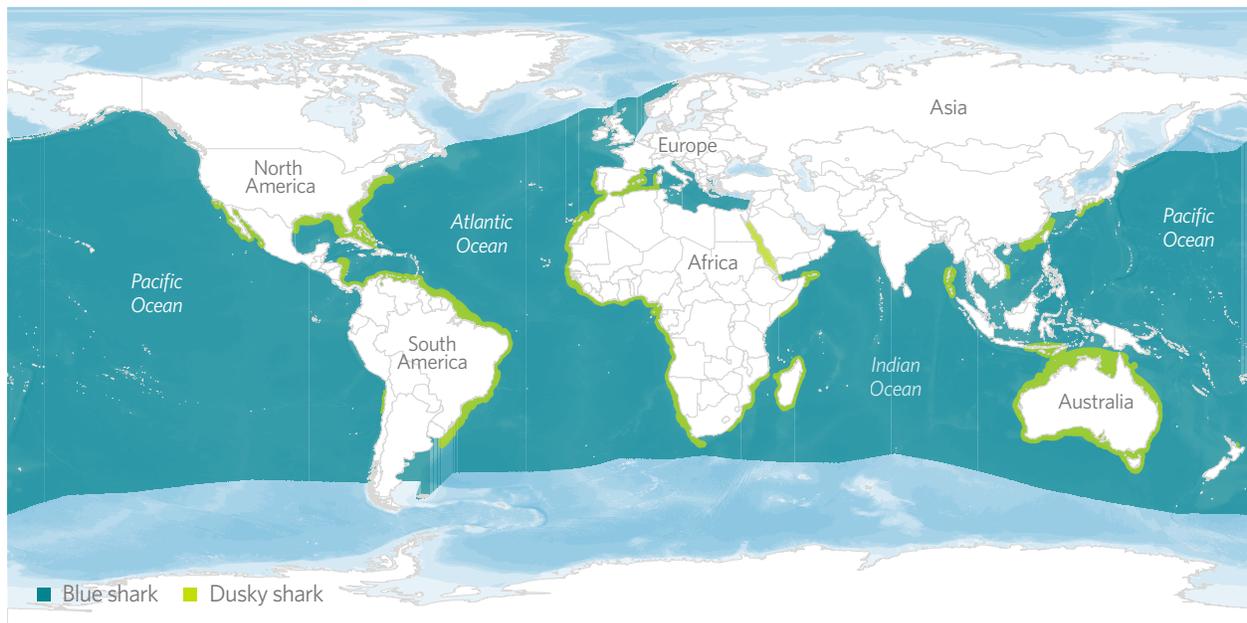
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Species threatened by the fin trade

The fin trade remains one of the major drivers of global shark declines. In recent years, several regularly traded species have gained protections through the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), but many have been left unprotected and have few restrictions on their global commerce.

Blue and dusky sharks, caught and traded for their high-value fins and increasingly for their meat, are urgently in need of better management. A CMS listing can help make sustainable fishing practices a priority by encouraging international action through regional fisheries management organizations (RFMOs), domestic regulations, or additional CITES listings.

Dusky shark (*Carcharhinus obscurus*) and Blue shark (*Prionace glauca*) distribution map



Profile: Dusky shark (*Carcharhinus obscurus*)



Proposed for Appendix II listing by Honduras
Recommended for inclusion by CMS Scientific Council

Dusky sharks are a large, highly migratory coastal and occasionally pelagic species found in tropical, subtropical, and temperate seas. Dusky sharks migrate seasonally to remain in warmer waters, moving both between States' exclusive economic zones (EEZs) and from EEZs into the high seas.

| The dusky shark has only two to 16 pups after a two-year pregnancy.²

Table 2
Declines by Region

Ocean	Estimated stock decline
	94% over 30 years ³
	62-82% over 30 years ⁴
	98.8% over 30 years ⁵
	70% (of species complex) ⁶
North-western and west-central Atlantic	79% over 40 years ⁷
	50% over 5 years ⁸
	80% over 16 years ⁹
	99% over 28 years ¹⁰
	73% over 35 years ¹¹
Indian (western Australia)	75% over 35 years ¹²

They are one of the least productive and most vulnerable of all shark species, giving birth to pups every two or three years. They also have low intrinsic growth rates, making them highly susceptible to overfishing (whether as target or bycatch).

IUCN status

The dusky shark is listed on the International Union for Conservation of Nature's Red List of Threatened Species as Vulnerable to extinction globally, due to sharp declines in its population worldwide.¹³ Regionally, the dusky shark was found to be Endangered in the north-western and west-central Atlantic Ocean, Vulnerable in the south-western Atlantic, and Data Deficient in the Mediterranean Sea and north-eastern Atlantic.¹⁴

Population threats

Unsustainable fishing is the greatest threat to this species, whether by targeted fisheries supplying dusky shark meat and fins for international trade, or by fisheries for other species retaining it as bycatch. Dusky shark fins accounted for about 1.4 percent of sharks sold in Hong Kong in the early 2000s, equating to 144,000 to 767,000 individuals per year.¹⁵

A 2016 stock assessment estimates that overfishing has caused a 73 percent decline in dusky sharks and that it will take decades for the species to recover.¹⁶

Management gaps

Although some countries, such as the United States and Australia, have set catch limits for dusky sharks, there are no international management measures in place to combat their steady decline. This lack of focus on the species by high seas regional fisheries management organizations is primarily due to their coastal, rather than pelagic, nature, but there has been a similar lack of action from range States and coastal regional fisheries bodies, and the species is not listed under CITES.

The 2007 "Review of Migratory Chondrichthyan Fishes" by the IUCN's Shark Specialist Group and CMS noted:

A CMS Appendix II listing could help to drive the improvements in national and regional management that are required if this species is to recover from depletion and become managed sustainably. Indeed, the species is so very vulnerable to overexploitation that it may qualify for an Appendix I listing, at least in parts of its range.¹⁷

Dusky sharks urgently need to be conserved wherever they are found, due to their particularly low reproductive rate; their significant population declines; the high demand for their fins, meat, and other parts; and the lack of regulation or protection across most of their range.

Profile: Blue shark (*Prionace glauca*)



Proposed for Appendix II listing by Sri Lanka and Samoa
Recommended for inclusion by CMS Scientific Council

The blue shark is a highly migratory species found in tropical, subtropical, and warm-temperate waters around the globe, both on the high seas and within EEZs.

These sharks take up to seven years to mature and can have up to 68 pups per litter.¹⁸ Their reproductive rate is higher than that of many shark species, but an estimated 20 million¹⁹ blue sharks are killed annually and their populations are declining globally. Blue sharks dominate the shark fin trade, and landings worldwide have nearly tripled since 2000. Without global cooperation, the lack of management for blue sharks and extensive targeting by fisheries place them at great risk of extinction.

| An estimated 20 million blue sharks are killed every year.

Table 3
Declines by Region

Ocean	Estimated stock decline
North-western Atlantic	53% ²⁰
	53% ²¹
	60% ²²
	80% decline in catch per unit effort for males since the mid-1980s ²³
Canadian Atlantic	5-6% annual decline in abundance since 1995 ²⁴

Despite huge catches, this species is unmanaged by the world's RFMOs.

IUCN status

The blue shark is considered Near Threatened globally and Critically Endangered in the Mediterranean.²⁵

Population threats

The species is caught in extensive, targeted fisheries on the high seas and is bycatch in other pelagic fisheries throughout its range. Blue sharks' proportion of all shark landings tripled from 1998 to 2011—from 4 to 14 percent.²⁶

The world's most traded shark—valued for its fins in Asia and meat in Europe.²⁷

Management gaps

There are no fisheries management measures—or international trade regulations—for blue sharks that extend throughout their range, so populations of this highly migratory species are likely to continue to decline until globally applicable, enforceable measures are introduced to prevent overexploitation.

None of the major RFMOs has adopted catch or bycatch limits for this species. Scientists with the International Commission for the Conservation of Atlantic Tunas have repeatedly recommended capping Atlantic blue shark catches, particularly in the South Atlantic, where it is at higher risk, but no action has been taken.

Despite its status as the most-caught shark, *P. glauca* is not listed under CITES.

The 2007 “Review of Migratory Chondrichthyan Fishes” by the IUCN and CMS noted:

There is no disagreement ... over the urgency of introducing management for this species; unfortunately no large-scale collaborative/regional management actions currently seem likely, other than those delivered through shark finning bans. The blue shark is certainly in urgent need of collaborative management by range States and through regional fisheries bodies, but appears not to be a high priority for action at the present time. A CMS Appendix II listing could help to drive the improvements in national and regional management that are required if this species is to be managed sustainably.²⁸

Flattened sharks disappearing fast

Guitarfish, wedgefish, and angel sharks—known for their flattened bodies—have been identified as three of the shark families with the highest risk of extinction, with severe declines across their ranges, according to the IUCN. All species in these depleted shark families need to become global conservation priorities before it's too late.

In many places, species in these three families have been completely wiped out through both targeted fishing and bycatch, and some of the most endangered species have been proposed for CMS listing at this COP. Guitarfish fins, along with those of wedgefish, a close relative, are also among the most highly valued in the shark fin trade, and these unique “flat shark” families are virtually unmanaged globally.

Common guitarfish (*Rhinobatos rhinobatos*) distribution map



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Profile: Common guitarfish (*Rhinobatos rhinobatos*)

Proposed for Appendix II listing by Senegal, Mauritania, Israel, and Togo
Recommended for inclusion by CMS Scientific Council

The common guitarfish, a medium-size ray, is a close cousin of more typical sharks with flattened bodies that are designed for life near the seabed. Mature adults found off West Africa and in the Mediterranean migrate seasonally from deep water (100 to 180 metres) into shallow coastal areas to mate and give birth, crossing international boundaries.

The common guitarfish is targeted by coastal fisheries during its breeding migrations and is taken as bycatch in net and trawl fisheries.

IUCN status

The common guitarfish is considered Endangered globally, in Europe, and in the Mediterranean.²⁹

Population threats

Fishing pressure is the largest threat facing this species. Unregulated fishing caused its suspected local extinction in the northern Mediterranean, and it has suffered large declines throughout the waters off West Africa.³⁰

Domestically, common guitarfish is caught for its meat. But the international trade highly values its fins because of their density and quality.

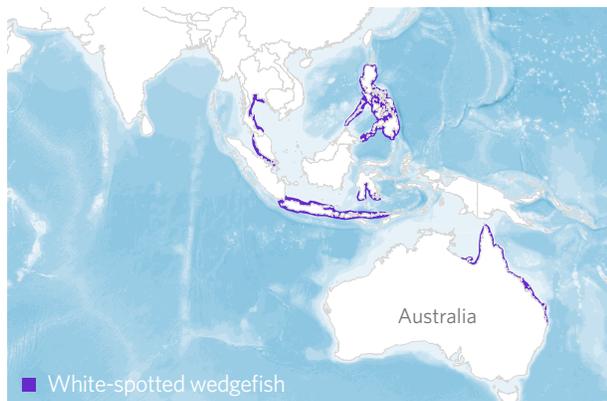
Despite being rays, wedgefish and guitarfish are being driven to extinction by the shark fin trade—with their fins one of the most expensive and desired for shark fin soup.

Management gaps

Despite its Endangered status worldwide, limited domestic and international protections are in place. Some States have adopted regulations to enforce guitarfish listings under the Barcelona Convention and the General Fisheries Committee for the Mediterranean, but monitoring for compliance and enforcement is often poor.³¹ EU Council Regulation 2017/127, Article 12, lists guitarfishes (*Rhinobatidae*) as prohibited species in European Union waters in subareas I to XII of the International Council for the Exploration of the Sea, but continued, unregulated targeted and bycatch fisheries exist in the southern Mediterranean.

However, more action is clearly needed to put in place proper management for a species that has been fished nearly to extinction across its range.

White-spotted wedgefish (*Rhynchobatus australiae*) distribution map



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Profile: White-spotted wedgefish (*Rhynchobatus australiae*)

Proposed for Appendix II listing by the Philippines
Recommended for inclusion by CMS Scientific Council

White-spotted wedgefish are large, bottom-dwelling rays that have been heavily affected by target and bycatch fisheries throughout their range. They inhabit shallow bays, estuaries, and coastal coral reefs.³²

It is the only widespread *Rhynchobatus* species found throughout the central Indo-West Pacific—as far east as Fiji and as far west as India.³³ Recent surveys have found that white-spotted wedgefish migrate between Indonesia and Australia.³⁴

These “flat sharks” have already disappeared from much of their historical range due to unsustainable catch in coastal fisheries.

IUCN status

The white-spotted wedgefish is listed as Vulnerable globally, and it is considered the third most threatened of all chondrichthyan families.³⁵

Population threats

White-spotted wedgefish are caught by artisanal and commercial fisheries both as a target species and as bycatch in demersal trawl, net, and longline fisheries. Their susceptibility to multiple gear types, and range along some of the world’s most heavily fished coastal regions, makes them particularly vulnerable.³⁶ Populations have likely declined throughout its range.³⁷

The fins of wedgefish, especially this species, are some of the most desired in the trade and are sold for extremely high prices—up to US\$396 per kilogram.³⁸ The fins are large and dominate the catch in Southeast Asia, making the species a significant portion of the international fin trade.³⁹

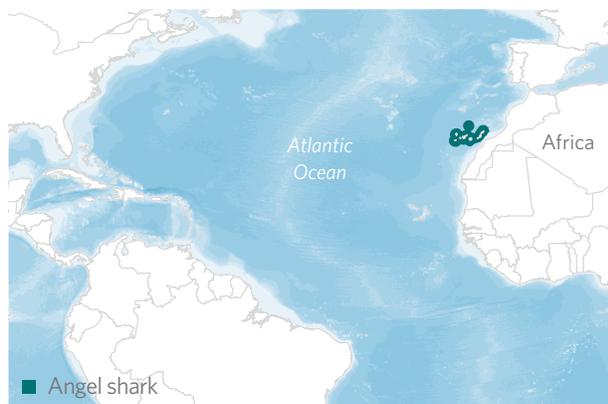
Management gaps

There are some measures that offer limited protection to the white-spotted wedgefish in parts of its range. But where management protocols are in place, they are rarely species-specific.

It also lacks international protection. Despite its value in trade and diminished populations, *R. australiae* is not listed under CITES. With no protections and unregulated international trade, this species is likely to be pushed to extinction unless enforceable measures are put in place to protect it from overexploitation.

An Appendix II CMS listing would raise the awareness of the need for domestic management of white-spotted wedgefish in all range States and facilitate cooperation among these States to protect the species, mitigate obstacles to migration, and preserve its habitat.

Angel shark (*Squatina squatina*) distribution map



Profile: Angel shark (*Squatina squatina*)

Proposed for Appendix I and II listing by Monaco
Recommended for inclusion by CMS Scientific Council

The angel shark is a medium-size bottom-dwelling shark found in coastal waters in the north-eastern and east-central Atlantic, the Mediterranean, and adjacent seas.

IUCN status

The angel shark is listed as Critically Endangered.⁴⁰

Population threats

Overfishing of angel sharks has resulted in local extinctions, and the species has disappeared throughout much of its former range over the last 100 years.⁴¹

Management gaps

The species is protected from targeted fisheries in part of its range under laws in Monaco and the EU, and incidentally in some marine protected areas where trawl and net fisheries are prohibited.

Regional fisheries prohibitions by the EU and the General Fisheries Commission for the Mediterranean, as well as listings under regional agreements, should provide protection and a framework for further action. However, public and fisher awareness of the angel shark's Threatened status and the existence of these measures is generally poor, and range State enforcement and compliance monitoring are often lacking.

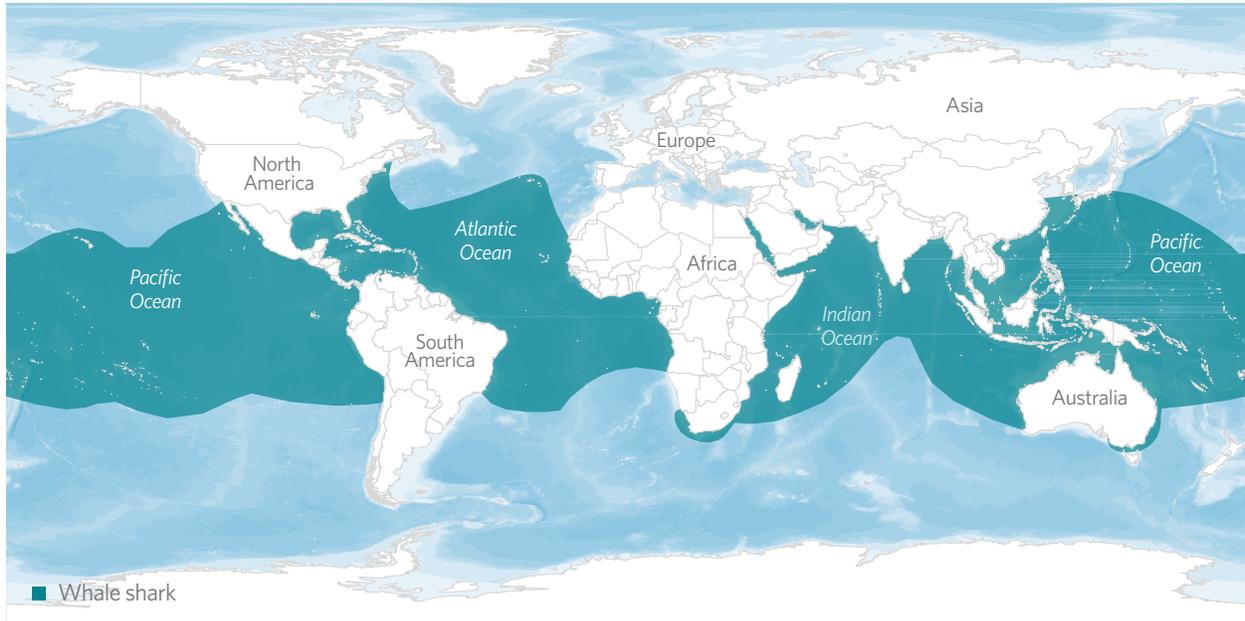
The angel shark would significantly benefit from a CMS Appendix I and II listing, as this would lead to full protection from the CMS parties whose waters cover a large part of its range.

Guitarfish, wedgefish, and angel sharks have been identified by the IUCN as among the world's most vulnerable shark families.⁴²

The world's largest fish—worth more alive

The host government of the Philippines has led the way ahead of the meeting by proposing more protections for the world's biggest fish: the whale shark. These sharks are a huge ecotourism draw domestically and indeed globally—making them worth far more alive than dead. But this iconic species is listed as endangered and is continuing to decline. Whale sharks are often fatally struck by ship propellers and are still caught in many parts of the world, often taken unintentionally as bycatch.

Whale shark (*Rhincodon typus*) distribution map



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Profile: Whale shark (*Rhincodon typus*)



Proposed for Appendix I listing by the Philippines, Israel, and Sri Lanka
Recommended for inclusion by CMS Scientific Council

The whale shark is the world's largest living fish—growing up to 40 feet long—and is a warm temperate species. Whale sharks appear to feed primarily on pelagic invertebrates, fish spawn, and small schooling fishes.⁴³

Whale shark tourism, mainly through recreational diving, is worth an estimated US\$47.5 million a year worldwide.⁴⁴ In 2003, Belize reported \$3.7 million from whale shark ecotourism alone, and it has been estimated that the economic value of a single whale shark in Belize is \$2.09 million over a shark's lifetime, or \$34,906 annually.⁴⁵

Whale shark tourism is worth about US\$47.5 million per year, supporting the livelihoods of many.

Table 4
Declines by Region

Ocean	Estimated stock decline ⁴⁶
Indo-Pacific	63% over 75 years
Global	More than 50% over the last 75 years
Atlantic	More than 30%

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IUCN status

Whale sharks are considered globally Endangered, a worrying recent reclassification from Vulnerable in 2005.⁴⁷

Population threats

Whale sharks are bycatch in both large- and small-scale fisheries, and are at times traded internationally. The sharks are also threatened by vessel strikes and the emergence of unsustainable tourism practices. Occasional deliberate catch or bycatch of whale sharks has been documented in many of their range States, particularly where large-mesh gillnets are common.⁴⁸

Management gaps

The CMS listed the whale shark on Appendix II in 1999, and CITES listed it in 2002. CITES requires parties to demonstrate that any exports were derived from a sustainably managed population, enabling exports and imports to be monitored through a permit system.

RFMOs have also banned the intentional setting of purse-seine nets around whale sharks in the eastern Pacific, west-central Pacific, and Indian oceans.

Many countries have also fully protected this species domestically. However, its diminished conservation status by the IUCN indicates that such measures may not be enough.

An Appendix I listing would lead to increased protections in range States where the species is still unprotected, and a greater focus on avoiding bycatch. A whale shark listing on Appendix I of CMS would likely also result in improved management of the species by RFMOs, particularly those where members are also parties to CMS.

Global management: Actions that are needed now

Although sharks face global extinction, it is not too late to reverse that trend. CMS, its fellow U.N. convention CITES, individual nations, and fisheries organizations have begun to build a framework of measures that can help these vulnerable top predators survive. And CMS can help build on that momentum.

CMS parties have the opportunity to work together at COP12 in Manila to afford greater protections to some of the ocean's most vulnerable and unmanaged species: dusky sharks, blue sharks, common guitarfish, white-spotted wedgefish, angel sharks, and whale sharks—but they must act now, before it's too late.

If governments can come together to list these sharks on CMS, and countries can take action nationally and through other intergovernmental bodies to protect and manage these species, these efforts will leave a lasting legacy of healthy populations of these iconic species. That in turn will help ensure abundant, productive marine ecosystems and oceans.



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