

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA

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CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II



Proposal Summary – Scalloped Hammerhead Shark *Sphyrna lewini*, Great Hammerhead Shark *Sphyrna mokarran*, and Smooth Hammerhead Shark *Sphyrna zygaena*

Proposal

Inclusion of the scalloped hammerhead shark *Sphyrna lewini* in Appendix II in accordance with Article II paragraph 2(a) of the Convention, satisfying Criterion A in Annex 2a of Resolution Conf. 9.24 (Rev. CoP14): “It is known, or can be inferred or projected, that the regulation of trade in the species is necessary to avoid it becoming eligible for inclusion in Appendix I in the near future.”

Inclusion of the great hammerhead shark *Sphyrna mokarran* and smooth hammerhead shark *Sphyrna zygaena* in Appendix II in accordance with Article II paragraph 2(b) of the Convention, satisfying Criterion A in Annex 2b of Resolution Conf. 9.24 (Rev. CoP14): “The specimens of the species in the form in which they are traded resemble specimens of a species included in Appendix II under the provisions of Article II, paragraph 2(a), or in Appendix I, such that enforcement officers who encounter specimens of CITES-listed species, are unlikely to be able to distinguish between them.”

A delay of 18 months in the entry into effect of the listing of these three species in Appendix II is proposed to provide time to resolve technical and administrative issues.

Proponents

Brazil, Costa Rica, Honduras, Colombia, Ecuador, Mexico, and the European Union.

Rationale

S. lewini qualifies for inclusion in CITES Appendix II because it is a globally threatened, low-productivity species that is over-exploited for its fins in targeted and incidental fisheries throughout its range. The two other threatened hammerhead shark species *S. mokarran* and *S. zygaena* meet the CITES look-alike criteria based on data indicating their association with *S. lewini* in the international shark fin trade. CITES Appendix II listing will assist States, regional entities, and Regional Fisheries Management Organizations (RFMOs) in ensuring compliance with finning and other prohibitions affecting these species, while also providing the basis for science-based limits on exports that can complement other fishery management measures and be enforced by importing CITES member States.

IUCN Red List Status

Sphyrna lewini – Endangered globally; *Sphyrna mokarran* – Endangered globally; *Sphyrna zygaena* – Vulnerable globally¹.

Species Description and Life History

There are two genera and eight to nine species within the hammerhead shark family Sphyrnidae, and these are distinguished by variations of the head shape. *Eusphyrna blochii*, the single species in its genus, has a much broader head; the three hammerhead species subject to this proposal – *S. lewini*, *S. mokarran* and *S. zygaena* – are the largest in the family, growing to at least 3m in total length.

Sphyrna lewini is a circumglobal shark, occurring in coastal warm, temperate, and tropical seas in the Atlantic, Pacific and Indian Oceans up to depths of at least 275m, from California to Peru, New Jersey to Brazil, Japan to Tahiti, and around most of the African coast, from the Mediterranean to Namibia in the west, and from the Red Sea to South Africa in the east. The species inhabits continental and insular shelves and has been observed close inshore as well as in adjacent deeper water; it is rarely encountered in the open ocean.

Hammerhead sharks give birth to live young after an 8–12-month gestation followed by a one-year resting period. Litter size varies from 12 to 41 globally; age at maturity and longevity also vary by region, with the maximum recorded longevity being 30.5 years in the northwest Atlantic. Several characteristics of *S. lewini* account for its vulnerability to population depletion and the long recovery period from over-exploitation. First, it is categorized by the UN Food and Agriculture Organization (FAO) as a low-productivity species: demographic analyses have determined *S. lewini* to have among the lowest rates of population growth and productivity of 26 shark species reviewed. In addition, *S. lewini* is known to aggregate in large numbers, particularly at seamounts, thus increasing the likelihood that fishing vessels can capture whole schools of these sharks. Distinct local populations of *S. lewini* are highly

¹ The full IUCN Red List species assessments and supporting documentation for *Sphyrna* spp. and details of the IUCN Red List and Red List Categories and Criteria are available at: www.iucnredlist.org

segregated, making re-colonization of depleted areas from neighbouring regions a slow and complex process. Since females display a high degree of site-fidelity to certain coastlines and nursery areas, and as no evidence exists of trans-oceanic movement, they, along with juveniles, are highly vulnerable to coastal fishing pressure.

Population Trends

S. lewini has declined globally to at least 15–20% of baseline for long-term series, according to studies over multiple areas, including South Africa, the northwest and western central Atlantic and Brazil. For example, declines of 98% since the mid-1970s have been reported in the northwest Atlantic, and catch data from Kwa-Zulu Natal in South Africa indicate reductions of approximately 64% over the 25-year period to 2003. Although data are lacking for certain regions, most notably the eastern Atlantic and Indian Ocean, similar circumstances and high levels of exploitation suggest that comparable rates of decline can be inferred.

Economic Importance

S. lewini is both targeted and taken as bycatch by domestic fisheries within exclusive economic zones (EEZs) and by multinational fisheries on the high seas. Due to its mainly coastal habitat, the species is targeted by both inshore artisanal fishing vessels and large commercial vessels and is caught in a wide variety of gear, including pelagic longlines, purse seines, gillnets, and trawl nets.

S. lewini is landed and sold in domestic markets and, in so doing, contributes to local subsistence needs in some coastal communities. Because hammerhead meat has a high urea content, it is often considered unpalatable, but it is consumed locally (usually salted or smoked) in certain countries, including in southern and East Africa. It is also used for the production of leather and liver oil. The predominant demand for the species is for the international fin trade.

Hammerhead shark catches are largely under-reported and unregulated, and there are wide discrepancies between catch and trade statistics. Where studies have been undertaken, high levels of bycatch rates within other fisheries and large numbers of landings of juvenile hammerheads indicate unsustainable pressure on the species; in some regions (notably the northwest and western central Atlantic), this has led to increased fisheries regulation, including reduced catch quotas.

S. lewini is caught in both inshore artisanal fisheries and by offshore European fishing vessels along the coast of **western Africa**; it is particularly heavily targeted by driftnets and gillnets from Mauritania to Sierra Leone. A recent study of bycatch rates in European industrial freeze trawlers off Mauritania showed that hammerhead

sharks represented 42% of total bycatch, with some catches comprised exclusively of juveniles. There is also evidence of hammerhead catch declines off Senegal and Gambia. In the **Western Indian Ocean**, *S. lewini* is targeted by artisanal and semi-industrial fisheries and is a significant bycatch of industrial vessels, including in the longline tuna and purse seine fisheries. Countries in the region with major shark fisheries include Kenya, Madagascar, Mozambique and the United Republic of Tanzania. *S. lewini* is among the main species being caught, and the vast majority of the catch is reported as exported for the international fin trade.

International Trade

Hammerhead shark fins – which are large, triangular and have a high fin ray count – are very highly prized and can sell for over USD 100 per kg on the Hong Kong shark fin market, the world's largest. Although many catches go unreported, analyses of fin trade data on the Hong Kong market have estimated that between 1.3 and 2.7 million *S. lewini* and *S. zygaena* (the fins of which are often categorized together at market) hammerhead sharks, equivalent to a biomass of 49,000–90,000 tonnes, are taken for the shark fin trade each year.

International trade in *S. lewini* products is currently unregulated. In addition, foreign shark trade information is not documented to the species level for sharks in the Harmonized Trade Schedule, and most countries do not report catches to either FAO or RFMOs. Data from the Hong Kong market, representing 44–59% of the shark fin trade between 1996 and 2000, are very illuminating regarding this trade: shark fin traders in the Hong Kong market are able to identify hammerhead fins from other shark fins and sort *S. lewini* and *S. zygaena* fins together and *S. mokarran* fins separately from other shark fins; together, *S. lewini*, *S. mokarran*, and *S. zygaena* represent nearly 6% of the shark fins entering the Hong Kong market, and originate from fisheries around the globe.

Illegal Trade and IUU Fishing²

The true extent of illegal fishing and trade in these hammerhead shark species is unknown. The high value of hammerhead fins, compared to the low value of their meat, means that they are frequently finned, and *Sphyrna* spp. have been shown to be among the species most often taken in illegal fishing. For example, according to the Indian Ocean Tuna Commission-IOTC, 120 longline vessels were reportedly operating illegally in the Western Indian Ocean prior to 2005, and this number is thought to have risen. Hammerhead sharks are among the main targets of these IUU vessels, and shark finning has been widely reported in other areas of the Indian Ocean, thus suggesting that illegal fishing and trade in these species are widespread. In

² IUU fishing is defined by the FAO as: illegal, unreported, and unregulated fishing.

the Eastern Tropical Pacific, recent cases of thousands of finned hammerhead carcasses found near marine protected areas (MPAs) where shark fishing is prohibited provide evidence that these protections are not sufficient to stem fishing of these species. Similarly, a 2004 decree banning exports of shark fins from Ecuador resulted in the establishment of new illegal trade routes through Peru and Colombia, which, given their value to this trade, are likely to include hammerhead species.

Legal Status

Hammerhead sharks are listed in Annex I, Highly Migratory Species, of the UN Convention on the Law of the Sea, yet no arrangements have yet been established for cooperating in the management of these species. *S. lewini* was included in CITES Appendix III in September 2012 at the request of Costa Rica, thus establishing the requirement for issuance and verification by importing countries of a CITES export permit for this species from Costa Rica and a certificate of origin for the species from other exporting countries.

At the regional level, nine RFMOs, including the International Commission for the Conservation of Atlantic Tunas-ICCAT and the IOTC – along with the European Union and at least 21 other countries, including the USA, Chile, and Australia – have established shark-finning bans, which require the full utilization of captured sharks and encourage the live release of incidentally caught sharks. This measure has the potential to reduce the numbers of hammerhead sharks killed solely for their fins but can only be effective with sufficient monitoring, controls, and enforcement.

ICCAT has adopted additional measures, namely a prohibition on retention, transshipment, landing, storing or selling of all hammerhead sharks of the *Sphyrnidae* family with the sole exception of *S. tiburo*. However, this measure applies only to member States of the treaty and to hammerhead sharks caught in

fisheries managed by ICCAT. Further, as ICCAT has no compliance mechanism, the impact of this measure is very difficult to assess.

At the national level, *S. lewini* should benefit from recent legislation enacted by States such as French Polynesia, Palau, Maldives, Honduras, and the Bahamas that prohibits shark fisheries throughout their EEZs. Other countries have established MPAs where no shark fishing is allowed, such as Cocos Island (Costa Rica), Malpelo (Colombia), and the Galapagos Islands (Ecuador). Several countries, including Ecuador, prohibit or regulate shark fin exports.

CITES History

S. lewini, *S. mokarran*, and *S. zygaena* were proposed for inclusion in CITES Appendix II on the same basis as the current proposal at CoP15 (Doha, 2010). The proposal garnered a majority of votes in favour but narrowly missed the two-thirds' majority required for adoption. The *ad hoc* Expert Panel convened in December 2009 by the FAO to review this and other CITES marine proposals concluded that these species meet the criteria for inclusion in Appendix II, and that

“an Appendix II listing for hammerhead shark might improve monitoring of catches at the species level (through documentation of trade flows) and assessment of sustainability of harvests (through provision of non-detriment findings). Few national markets for hammerhead shark products exist, so most of the products in trade would move internationally and would thus come under the Appendix II regulatory provisions. However, it is also possible that enhanced regulation of trade would encourage more sustainable use of this species and thus reduce pressure on stocks.” (FAO, 2009)

S. lewini was included in CITES Appendix III for Costa Rica in September 2012.

This summary of the proposal for CITES listing has been prepared by a coalition of NGOs working to promote shark conservation. It is not a formal CITES document. The original full text of the proposals can be found here:<http://www.cites.org/eng/cop/16/prop/index.php>

