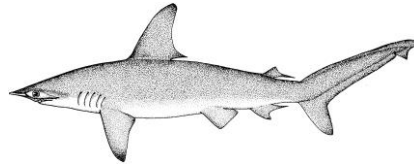


APPENDIX IX
EXECUTIVE SUMMARY: SCALLOPED HAMMERHEAD SHARK (2024)



CITES APPENDIX II species

Table A 1. Status of scalloped hammerhead shark (*Sphyrna lewini*) in the Indian Ocean.

Area ¹	Indicators	2018 stock status determination
Indian Ocean	Reported catch 2023 (t) ³ Not elsewhere included (nei) sharks ² 2023 (t) Average reported catch 2019-23 (t) Av. not elsewhere included 2019-2023 (nei) sharks ² (t)	1,397 30,108 470 31,452
	MSY (1,000 t) (80% CI) F _{MSY} (80% CI) SB _{MSY} (1,000 t) (80% CI) F _{current} /F _{MSY} (80% CI) SB _{current} /SB _{MSY} (80% CI) SB _{current} /SB ₀ (80% CI)	unknown

¹Boundaries for the Indian Ocean = IOTC area of competence

²Includes all other shark catches reported to the IOTC Secretariat, which may contain this species (i.e., SKH: Various sharks nei; SPN: Hammerhead sharks nei).

³Proportion of catch fully or partially estimated for 2023: 0% All catches within the database were reported by CPCs.

Colour key	Stock overfished (SB _{year} /SB _{MSY} < 1)	Stock not overfished (SB _{year} /SB _{MSY} ≥ 1)
Stock subject to overfishing (F _{year} /F _{MSY} > 1)		
Stock not subject to overfishing (F _{year} /F _{MSY} ≤ 1)		
Not assessed/Uncertain		

Table A 1. IUCN threat status of scalloped hammerhead shark (*Sphyrna lewini*) in the Indian Ocean.

Common name	Scientific name	IUCN threat status ³		
		Global status	WIO	EIO
Scalloped hammerhead shark	<i>Sphyrna lewini</i>	Critically Endangered	Critically Endangered	–

IUCN = International Union for Conservation of Nature; WIO = Western Indian Ocean; EIO = Eastern Indian Ocean

³The process of the threat assessment from IUCN is independent from the IOTC and is presented for information purpose only

Sources: IUCN Red List 2020, Rigby et al 2019

INDIAN OCEAN STOCK – MANAGEMENT ADVICE

Stock status. The current IUCN threat status of ‘Critically Endangered’ applies to scalloped hammerhead sharks globally but specifically for the western Indian Ocean the status is ‘Critically Endangered’ (**Table A 1**). The ecological risk assessment (ERA) conducted for the Indian Ocean by the WPEB and SC in 2018 consisted of a semi-quantitative risk assessment analysis to evaluate the resilience of shark species to the impact of a given fishery, by combining the biological productivity of the species and its susceptibility to each fishing gear type (Murua *et al.* 2018). Scalloped hammerhead shark received a low vulnerability ranking (No. 17) in the ERA rank for longline gear because it was estimated to be one of the least productive shark species but was also characterised by a lower susceptibility to longline gear. Scalloped hammerhead shark was estimated as the twelfth most vulnerable shark species in the ERA ranking for purse seine gear, but with lower levels of vulnerability compared to longline gear, because the susceptibility was lower for purse seine gear. There is a paucity of information available on this species and this situation is not expected to improve in the short to medium term. Scalloped hammerhead sharks are commonly taken by a range of fisheries in the Indian Ocean. They are extremely vulnerable to gillnet and prawn trawl fisheries, especially when these occur in and around nursery areas. Scalloped hammerheads are commonly landed in coastal fisheries in the Western Indian Ocean, and have often been recorded among the species with the highest catches numerically. While species-level catch data are limited for the region, there are several sources of published and unpublished data on catches of this species. Furthermore, pups occupy shallow coastal nursery grounds, often heavily exploited by inshore fisheries. Because of their life history characteristics – they are relatively long lived (over 30 years) and have relatively few offspring (<31 pups each year), the scalloped hammerhead shark is vulnerable to overfishing. The stock status is **unknown** due to a lack of data available for quantitative stock assessment or basic fishery indicators (**Table A**).

Outlook. The marked increase in catches over the previous year (200 t) is due to the breakdown by species reporting this year by Kenya and Tanzania, which previously reported sharks aggregated. Piracy in the western Indian Ocean has resulted in the displacement and subsequent concentration of a substantial portion of longline fishing effort into certain areas in the southern and eastern Indian Ocean. Some longline vessels have returned to their traditional fishing areas in the northwest Indian Ocean, due to the increased security onboard vessels, with the exception of the Japanese fleet which has still not returned to the levels seen before the start of the piracy threat. It is therefore unlikely that catch and effort from longline fleets on scalloped hammerhead shark declined in the southern and eastern areas during this time period and may have resulted in localised depletion there. Mortality from coastal fisheries remain high and unmonitored.

Management advice. Despite the absence of stock assessment information, the Commission should consider taking a cautious approach by implementing some management actions for scalloped hammerhead sharks. While mechanisms exist for encouraging CPCs to comply with their recording and reporting requirements (Resolution 18/07), these need to be further implemented by the Commission so as to better inform scientific advice.

The following key points should be noted:

- **Maximum Sustainable Yield (MSY):** Unknown.
- **Reference points:** Not applicable.
- **Main fishing gear (2019-2023):** Gillnet; Handline, longline-coastal; Ringnet; and offshore gillnet, Prawn trawl fisheries

- **Main fleets** (2019-23): Mozambique, Madagascar, Kenya; Tanzania; Sri Lanka; Malaysia, I. R Iran; (report as released alive/discarded by United Kingdom, EU-France, South Africa,) (artisanal fisheries)

LITERATURE CITED

- De Bruyn, P., Dudley, S.F.J., Cliff, G. and Smale, M.J., 2005. Sharks caught in the protective gill nets off KwaZulu-Natal, South Africa. 11. The scalloped hammerhead shark *Sphyrna lewini* (Griffith and Smith). *African Journal of Marine Science*, 27(3), pp.517-528.
- Doukakis, P., Hanner, R., Shivji, M., Bartholomew, C., Chapman, D., Wong, E. and Amato, G., 2011. Applying genetic techniques to study remote shark fisheries in northeastern Madagascar. *Mitochondrial DNA*, 22(sup1), pp.15-20.
- Kiilu, B.K., Kaunda-Arara, B., Oddenyo, R.M., Thoya, P. and Njiru, J.M., 2019. Spatial distribution, seasonal abundance and exploitation status of shark species in Kenyan coastal waters. *African Journal of Marine Science*, 41(2), pp.191-201.
- Humber, F., Andriamahaino, E.T., Beriziny, T., Botosoamananto, R., Godley, B.J., Gough, C., Pedron, S., Ramahery, V. and Broderick, A.C., 2017. Assessing the small-scale shark fishery of Madagascar through community-based monitoring and knowledge. *Fisheries Research*, 186, pp.131-143.
- Marshall, N.T., and Barnett, R. 1997. *The trade in sharks and shark products in the Western Indian and Southeast Atlantic Oceans*. Nairobi, Kenya.
- Murua H, Santiago, J, Coelho, R, Zudaire I, Neves C, Rosa D, Semba Y, Geng Z, Bach P, Arrizabalaga, H., Baez JC, Ramos ML, Zhu JF and Ruiz J. (2018). Updated Ecological Risk Assessment (ERA) for shark species caught in fisheries managed by the Indian Ocean Tuna Commission (IOTC). IOTC–2018–SC21–14_Rev_1.
- Osuka, K.E., Samoilys, M.A., Musembi, P., Thouless, C.J., Obota, C. and Rambahiniarison, J., 2025. Status and characteristics of sharks and rays impacted by artisanal fisheries: potential implications for management and conservation. *Marine and Fishery Sciences (MAFIS)*, 38(1).
- Rigby, C.L., Dulvy, N.K., Barreto, R., Carlson, J., Fernando, D., Fordham, S., Francis, M.P., Herman, K., Jabado, R.W., Liu, K.M., Marshall, A., Pacoureau, N., Romanov, E., Sherley, R.B. & Winker, H. 2019. *Sphyrna lewini*. The IUCN Red List of Threatened Species 2019: e.T39385A2918526. Accessed on 06 December 2023.
- Robinson, L., and Sauer, W.H.H. 2013. A first description of the artisanal shark fishery in northern Madagascar: implications for management. *African Journal of Marine Science*, 35:1, pp. 9-15, DOI: 10.2989/1814232X.2013.769906