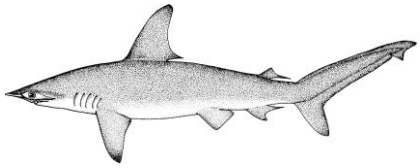
Food and Agriculture Organization of the United Nations

Indian Ocean Tuna Commission
Commission des Thons de l'Ocean Indien
iotc ctoi

APPENDIX 25
EXECUTIVE SUMMARY: SCALLOPED HAMMERHEAD SHARK (2020)



CITES APPENDIX II species

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

Area[1]	Indicators		2018 stock status determination
Indian Ocean	Reported catch 2019	51 t	
	Not elsewhere included (nei) sharks[2] 2019	21,899 t	
	Average reported catch 2015-19	67 t	
	Av. not elsewhere included 2015-2019 (nei) sharks[2]	38,190 t	
	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	

[1]Boundaries for the Indian Ocean = IOTC area of competence
[2]Includes all other shark catches reported to the IOTC Secretariat, which may contain this species (i.e., SHK: sharks various nei; RSK: requiem sharks nei).

Colour key	Stock overfished ($SB_{year}/SB_{MSY} < 1$)	Stock not overfished ($SB_{year}/SB_{MSY} \geq 1$)
Stock subject to overfishing ($F_{year}/F_{MSY} > 1$)		
Stock not subject to overfishing ($F_{year}/F_{MSY} \leq 1$)		
Not assessed/Uncertain		

Table 2. 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	*Sphyrna lewini*	Critically Endangered	Endangered	–

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

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

Sources: IUCN Red List 2020, Baum 2007

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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 'Endangered' (**Table 2**). 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 fisheries. 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 relativity few offspring (<31 pups each year), the scalloped hammerhead shark is vulnerable to overfishing. There is no quantitative stock assessment or basic fishery indicators currently available for scalloped hammerhead shark in the Indian Ocean therefore the stock status is unknown (**Table 1**).

Outlook. Maintaining or increasing effort can result in declines in biomass and productivity. 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 on scalloped hammerhead shark declined in the southern and eastern areas during this time period, and may have resulted in localised depletion there.

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** (2014-2018): Ringnet; Gillnet; longline-coastal; longline (fresh) and offshore gillnet.
- **Main fleets** (2014-18): Sri Lanka; Kenya; Seychelles; NEI-Fresh (report as released alive/discarded by EU-France, South Africa, Indonesia, Japan).

LITERATURE CITED

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