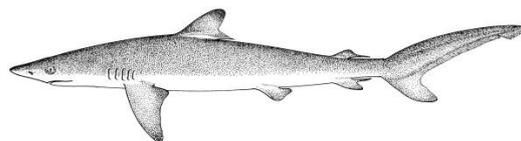


## EXECUTIVE SUMMARY: SILKY SHARK



Indian Ocean Tuna Commission  
Commission des Thons de l'Océan Indien

Status of the Indian Ocean silky shark (FAL: *Carcharhinus falciformis*)TABLE 1. Silky shark: Status of silky shark (*Carcharhinus falciformis*) in the Indian Ocean.

Area <sup>1</sup>	Indicators	2017 stock status determination
Indian Ocean	Reported catch 2016: 2,189 t Not elsewhere included (nei) sharks <sup>2</sup> 2016: 54,495 t Average reported catch 2012-16: 3,278 t Av. not elsewhere included (nei) sharks <sup>2</sup> 2012-16: 49,152 t	unknown
	MSY (1,000 t) (80% CI): F <sub>MSY</sub> (80% CI): SB <sub>MSY</sub> (1,000 t) (80% CI): F <sub>current</sub> /F <sub>MSY</sub> (80% CI): SB <sub>current</sub> /SB <sub>MSY</sub> (80% CI): SB <sub>current</sub> /SB <sub>0</sub> (80% CI):	

<sup>1</sup>Boundaries for the Indian Ocean = IOTC area of competence

<sup>2</sup>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 <sub>year</sub> /SB <sub>MSY</sub> < 1)	Stock not overfished (SB <sub>year</sub> /SB <sub>MSY</sub> ≥ 1)
Stock subject to overfishing (F <sub>year</sub> /F <sub>MSY</sub> > 1)		
Stock not subject to overfishing (F <sub>year</sub> /F <sub>MSY</sub> ≤ 1)		
Not assessed/Uncertain		

TABLE 2. Silky shark: IUCN threat status of silky shark (*Carcharhinus falciformis*) in the Indian Ocean.

Common name	Scientific name	IUCN threat status <sup>3</sup>		
		Global status	WIO	EIO
Silky shark	<i>Carcharhinus falciformis</i>	Near Threatened	Near Threatened	Near Threatened

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

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

Sources: IUCN 2007, 2012

## INDIAN OCEAN STOCK – MANAGEMENT ADVICE

**Stock status.** There remains considerable uncertainty about the relationship between abundance and the nominal CPUE series from the main longline fleets, and about the total catches over the past decade (Table 1). The ecological risk assessment (ERA) conducted for the Indian Ocean by the WPEB and SC in 2012<sup>1</sup> 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. Silky shark received a high vulnerability ranking (No. 4) in the ERA rank for longline gear because it was estimated to be one of the least productive shark species, and with a high susceptibility to longline gear. Silky shark was estimated to be the second most vulnerable shark species in the ERA ranking for purse seine gear, due to its low productivity and high susceptibility to purse seine gear. The current IUCN threat status of 'Near Threatened' applies to silky shark in the western and eastern Indian Ocean and globally (Table 2). There is a paucity of information available on this species but several studies have been carried out for this species in the recent years. Silky sharks are commonly taken by a range of fisheries in the Indian Ocean. Because of their life history characteristics – they are relatively long lived (over 20 years), mature relatively late (at 6–12 years), and have relatively few offspring (<20 pups every two years), the silky shark can be vulnerable to overfishing.

<sup>1</sup> Murua et al., 2012.

Despite the lack of data, there is some anecdotal information suggesting that silky shark abundance has declined over recent decades, including from Indian longline research surveys, which are described in the IOTC Supporting Information for silky shark sharks. There is no quantitative stock assessment or basic fishery indicators currently available for silky shark in the Indian Ocean therefore the stock status is **unknown**.

**Outlook.** Maintaining or increasing effort can probably result in declines in biomass, productivity and CPUE. The impact of 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 silky shark has declined in the southern and eastern areas, 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 silky sharks. While mechanisms exist for encouraging CPCs to comply with their recording and reporting requirements (Resolution 16/06), these need to be further implemented by the Commission so as to better inform scientific advice.

The following key points should also be noted:

- **Maximum Sustainable Yield (MSY):** Unknown.
- **Reference points:** Not applicable.
- **Main fishing gear (2012-16):** Gillnet; gillnet-longline; longline (fresh); longline-gillnet.
- **Main fleets (2012-16):** Sri Lanka; I.R. Iran; Taiwan,China.