

RESOURCE STOCK STATUS SUMMARY – INDO-PACIFIC SAILFISH



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



Status of the Indian Ocean Indo-Pacific sailfish (SFA: *Istiophorus platypterus*) resource

TABLE 1. Indo-Pacific sailfish: Status of Indo-Pacific sailfish (*Istiophorus platypterus*) in the Indian Ocean.

Area ¹	Indicators		2019 stock status determination
Indian Ocean	Catch 2018 ² :	36,911 t	
	Average catch 2014-2018:	31,267 t	
	MSY (1,000 t) (80% CI):	23.9 (16.1 – 35.4)	
	F _{MSY} (80% CI):	0.19 (0.14 - 0.24)	
	B _{MSY} (1,000 t) (80% CI):	129 (81–206)	
	F ₂₀₁₇ /F _{MSY} (80% CI):	1.22 (1 – 2.22)	
B ₂₀₁₇ /B _{MSY} (80% CI):	1.14 (0.63 – 1.39)		
	B ₂₀₁₇ /B ₀ (80% CI):	0.57 (0.31 – 0.70)	

¹ Boundaries for the Indian Ocean = IOTC area of competence.

² Proportion of catches estimated or partially estimated by IOTC Secretariat in 2019: 28%.

Colour key	Stock overfished (B _{year} /B _{MSY} < 1)	Stock not overfished (B _{year} /B _{MSY} ≥ 1)
Stock subject to overfishing (F _{year} /F _{MSY} > 1)	17%	60%
Stock not subject to overfishing (F _{year} /F _{MSY} ≤ 1)	5%	16%
Not assessed/Uncertain		

INDIAN OCEAN STOCK – MANAGEMENT ADVICE

Stock status. A new stock assessment was carried out for Indo-Pacific sailfish in 2019 using the C-MSY model. The data poor stock assessment techniques indicated that F was above F_{MSY} (F/F_{MSY}=1.22) and B is above B_{MSY} (B/B_{MSY}=1.14). Another alternative model using the Stock Reduction Analysis (SRA) techniques produced similar results. The stock appears to show a continued increase catches which is a cause of concern (**Fig. 1**), indicating that fishing mortality levels may be becoming too high (**Fig. 2**). However both assessment models relies on catch data, however the catch series is highly uncertain. In addition aspects of the biology, productivity and fisheries for this species combined with the data poor status on which to base a more formal assessment are also a cause for concern. On the weight-of-evidence available in 2019, the stock status cannot be assessed and is determined to be uncertain.

Outlook. Catches since 2009 have exceeded the estimated MSY, and have also increased by 58% between 2008 and 2017. This increase in coastal gillnet catches and fishing effort in recent years is a substantial cause for concern for the Indian Ocean stock, however there is not sufficient information to evaluate the

effect this will have on the resource. It is also noted that 2017 catches (33,136 t) exceed the catch limit prescribed in Resolution 18/05 (25,000 t).

Management advice. The catch limits as stipulated in Resolution 18/05 have been exceeded. The Commission should provide mechanisms to ensure that catch limits are not exceeded by all concerned fisheries. Research emphasis on further developing possible CPUE indicators from gillnet fisheries, and further exploration of stock assessment approaches for data poor fisheries are warranted. Given the limited data being reported for coastal gillnet fisheries, and the importance of sports fisheries for this species, efforts must be made to rectify these information gaps. The lack of catch records in the Persian Gulf should also be examined to evaluate the degree of localised depletion in Indian Ocean coastal areas.

The following key points should also be noted:

- **Maximum Sustainable Yield (MSY):** estimate for the Indian Ocean stock is 23,900 t.
- **Provisional reference points:** Although the Commission adopted reference points for swordfish in Resolution 15/10 on target and limit reference points and a decision framework, no such interim reference points have been established for I.P. sailfish.
- **Main fishing gear (average catches 2014-18):** gillnets account for around 74% of total catches in the Indian Ocean, followed by troll and hand lines (23%), with remaining catches recorded under longlines and other gears (Fig. 1).
- **Main fleets (average catches 2014-18):** Three quarters of the total catches of Indo-Pacific sailfish are accounted for by four countries situated in the Arabian Sea: I.R. Iran (gillnets): 33%; India (gillnets and trolling): 22%; Pakistan (gillnets): 14%; and Sri Lanka (gillnets and fresh longline): 7%.

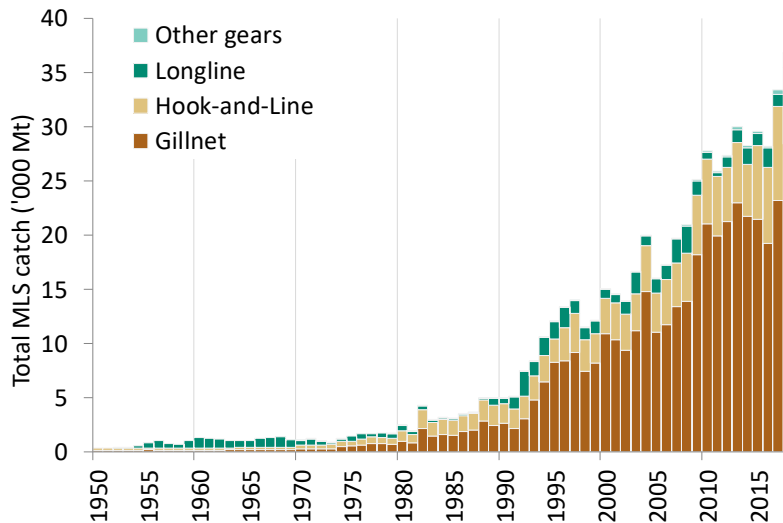


Fig. 1. Indo-Pacific sailfish: catches by gear and year recorded in the IOTC Database (1950–2018).

Notes: Other gears (OT) includes: longline-gillnet, handline, gillnet, coastal longline, troll line, sport fishing, and all other gears

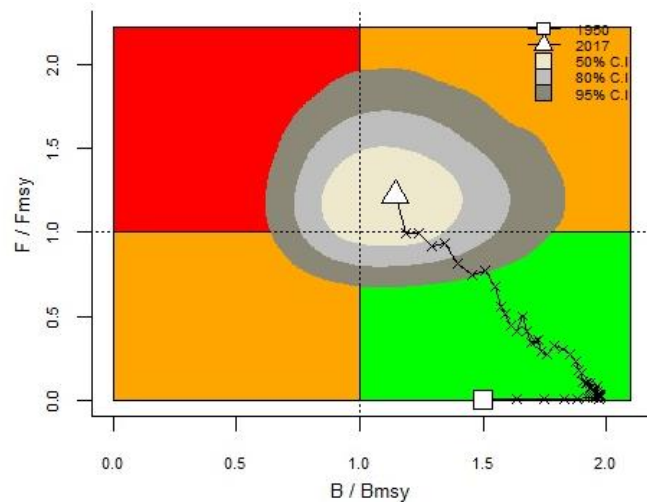


Fig.2. Indo-Pacific sailfish: Stock reduction analysis (C-MSY Method) of aggregated Indian Ocean assessment Kobe plot (contours are the 50, 65 and 90 percentiles of the 2017 estimate). Black lines indicate the trajectory of the point estimates (blue circles) for the B ratio and F ratio for each year 1950–2017.