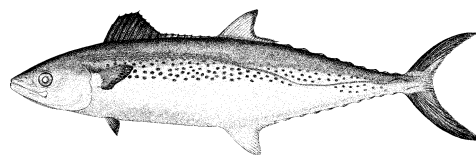


**DRAFT EXECUTIVE SUMMARY: INDO-PACIFIC KING MACKEREL**

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



**Status of the Indian Ocean Indo-Pacific king mackerel (GUT: *Scomberomorus guttatus*) resource**

**TABLE 1.** Indo-Pacific king mackerel: Status of Indo-Pacific king mackerel (*Scomberomorus guttatus*) in the Indian Ocean.

Area <sup>1</sup>	Indicators		2016 stock status determination
Indian Ocean	Catch <sup>2</sup> 2015:	45,956 t	
	Average catch <sup>2</sup> 2011–2015:	45,485 t	
	MSY (1,000 t) [*]:	46 [38.9–54.4]	
	F <sub>MSY</sub> [*]:	0.52 [0.40–0.69]	
	B <sub>MSY</sub> (1,000 t) [*]:	66.0 [45.9–107.9]	
	F <sub>2014</sub> /F <sub>MSY</sub> [*]:	0.98 [0.85–1.14]	
	B <sub>2014</sub> /B <sub>MSY</sub> [*]:	1.10 [0.84–1.29]	
	B <sub>2014</sub> /B <sub>0</sub> [*]:	0.55 [0.42–0.64]	

<sup>1</sup>Boundaries for the Indian Ocean stock assessment are defined as the IOTC area of competence.

<sup>2</sup>Nominal catches represent those estimated by the IOTC Secretariat. If these data are not reported by CPCs, the IOTC Secretariat estimates total catch from a range of sources including: partial catch and effort data; data in the FAO FishStat database; catches estimated by the IOTC from data collected through port sampling; data published through web pages or other means; data reported by other parties on the activity of vessels; and data collected through sampling at the landing place or at sea by scientific observers.

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		

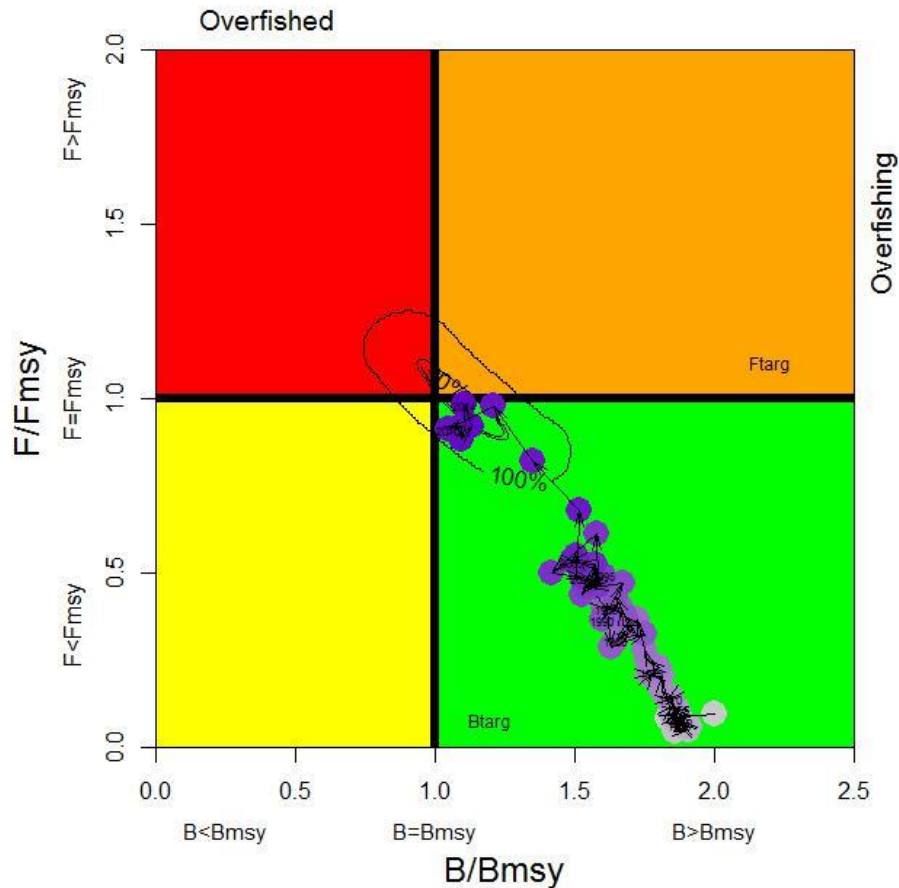
### INDIAN OCEAN STOCK – MANAGEMENT ADVICE

**Stock status.** Following a first data-poor assessment in 2015, Indo-Pacific king mackerel was again assessed using SRA techniques (Catch-MSY and OCOM) in 2016. The OCOM model, considered the more robust of the two SRA models applied in terms of assumptions and treatment of priors, indicates that overfishing is not occurring and the stock is not overfished (Fig. 1; Table 1). Moreover, the average catches (c. 45,000 t) over the last 5 years have been within the estimated MSY range (43,000 – 46,000 t). However, catches have increased in the last 2 years and in 2014 exceeded this MSY range. The continuing low levels of catch reporting for this species, coupled with the highly variable and uncertain estimates of growth parameters used to estimate model priors, prompted the WPNT to exercise caution in interpreting model results for king mackerel. Consequently, and similar to 2015, the WPNT considered that stock status in relation to the Commission's B<sub>MSY</sub> and F<sub>MSY</sub> target reference points remains **uncertain** (Table 1), indicating that a precautionary approach to the management of Indo-Pacific king mackerel should be adopted.

**Outlook.** Total annual catches for Indo-Pacific king mackerel have started to increase over the last 2 years and are likely to have increased pressure on the Indian Ocean stock. There remains considerable uncertainty about stock structure and the total catches. Due to a lack of fishery data for several gears, only data poor assessment approaches can currently be used. Aspects of the fisheries for this species, combined with the lack of data on which to base a more formal assessment, are a cause for considerable concern. In the interim, and until more data-rich approaches can be applied, data-poor approaches will be required to assess stock status. Though data-poor methods are yet to be used to provide stock status advice, further refinements to the SRA models and application of additional data-poor approaches may improve confidence in the results.

The following should be noted:

- The Maximum Sustainable Yield estimate for the whole Indian Ocean is between 43,000 and 46,000 t, while catches in recent years have exceeded this target.
  - Data collection and reporting urgently need to be improved.
  - Reconstruction of the catch history needs to occur before a reliable assessment can be attempted.
  - Limit reference points: The Commission has not adopted limit reference points for any of the neritic tunas under its mandate.
- **Management advice.** A precautionary approach to the management of IP king mackerel should be considered by the Commission, by ensuring that catches are reduced to levels below the current estimated range of MSY. The stock should be closely monitored. Mechanisms need to be developed by the Commission to improve current statistics by encouraging CPCs to comply with their recording and reporting requirement, so as to better inform scientific advice.



**Fig. 1.** Indo-Pacific king mackerel: OCOM Indian Ocean assessment Kobe plot (Plausible range shown around 2014 estimate). Blue circles indicate the trajectory of the point estimates for the SB ratio and F ratio for each year 1950–2014. Target reference points are shown ( $B_{MSY}$  and  $F_{MSY}$ ).